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# THE EFFECT OF CORPORATE GOVERNANCE AND FIRM CHARACTERISTICS ON EARNINGS MANAGEMENT PRACTICE AMONG NIGERIAN COMPANIES

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Thesis Submitted to
Othman Yeop Abdullah Graduate School of Business,
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## Abstract

Earnings management has become an avenue for the managers to report determined corporate performance which later led to the collapse of the corporations. Corporate governance mechanisms instituted to control the managers' opportunistic action which reduces agency cost of the firms. The present study investigates the relationship between the board of directors, audit committee and firm characteristics and earnings management practice in Nigerian listed companies. The study also investigates the earnings management practice in the pre- and post-Corporate Governance Code 2011 periods. The study argues that interaction of institutional ownership between audit committee and earnings management practice mitigates opportunistic behaviors of managers. The study measured the effectiveness of the revised Nigerian Corporate Governance Code 2011 mechanisms which came into effect in 2011. Data were gathered from 405 non-financial company-year observations drawn from the population of Nigerian listed companies for the period of 2009-2013. With reference to the agency theory, political cost theory and ethical theory, the present study finds that the revised Corporate Governance Code 2011 has a significant effect in reducing the level of earnings management practice in the post Corporate Governance Code 2011 period; corporate governance mechanisms significantly reduce earnings management practice; and institutional ownership interaction effect in the audit committee is significantly more active in reducing earnings management. Based on the findings, the study suggests that for future policy effective corporate governance is required to mitigate earnings management activities. The regulators need to encourage participation of institutional ownership in the board of public listed companies.



**Keywords:** earnings management, corporate governance mechanisms, firm characteristics, institutional ownership, Nigeria

## Abstrak

Pengurusan perolehan telah menjadi saluran bagi pengurus untuk melaporkan prestasi syarikat di bawah seliaan mereka yang telah membawa keruntuhan syarikat. Mekanisme tadbir urus korporat dimulakan untuk mengawal tindakan oportunis pengurus yang tidak berasaskan isu agensi. Kajian ini menyiasat hubungan antara lembaga pengarah, jawatankuasa audit, ciri-ciri firma, dan pengurusan perolehan oleh syarikat yang tersenarai di Nigeria. Kajian juga menyiasat sejauh mana pengurusan perolehan syarikat dalam tempoh pra dan pascakod 2011. Hujah kajian ini adalah interaksi pemilikan institusi dalam jawatankuasa audit mengurangkan tingkah laku oportunis pengurus. Kajian ini mengukur kesan kod tadbir urus korporat di Nigeria yang telah disemak semula dan dikuatkuasakan pada tahun 2011. Data kajian daripada 405 syarikat bukan kewangan dalam tahun pemerhatian yang mana syarikat ini diambil dari populasi syarikat yang tersenarai di Nigeria dari tempoh 2009-2013. Dengan merujuk teori agensi, teori kos politik dan teori etika, kajian ini mendapati bahawa kod tadbir urus korporat yang telah disemak semula dan dilaksanakan pada tahun 2011 memberi kesan signifikan dalam mengurangkan tahap pengurusan pendapatan dalam tempoh pascapelaksanaan. Mekanisme tadbir urus korporat juga memberi kesan signifikan dalam mengurangkan pengurusan perolehan dan interaksi pemilikan institut memberi kesan terhadap jawatankuasa audit yang mana jawatankuasa ini secara signifikannya lebih aktif dalam mengurangkan pengurusan pendapatan. Berdasarkan dapatan kajian, kajian ini mencadangkan yang tadbir urus syarikat yang efektif diperlukan untuk mengawal aktiviti pengurusan perolehan. Pihak penggubal undang-undang perlu mempertimbangkan penyertaan secara mandatori oleh pemilikan institusi dalam lembaga pengarah syarikat awam yang tersenarai.



**Katakunci:** pengurusan pendapatan, mekanisme tadbir urus syarikat, ciri-ciri firma, pemilikan institusi, Nigeria



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## List of Abbreviations

| | |
|---|---|
| ACIN | Audit Committee Independence |
| ACS | Audit Committee Size |
| BOFIA | Bank and Other Financial Institutions Act |
| BOIN | Board Independence |
| CBN | Central Bank of Nigeria |
| CEOD | Chief Executive Officer Duality |
| DA | Discretionary Accruals |
| DCA | Discretionary Current Accruals |
| DH | Directors Shareholding |
| FEAC | Financial Expertise in Audit Committee |
| FRCN | Financial Reporting Council of Nigeria |
| GAAP | General Accepted Accounting Standard |
| IA | Insurance Act |
| IO | Institutional Ownership |
| ISA | Investment Securities Act |
| NAICOM | National Insurance Commission |
| NDIC | Nigerian Deposit Insurance Corporation |
| NSA | Nigerian Stock Exchange |
| PENCOM | Pension Commission |
| ROA | Return on Asset |
| ROE | Return on Equity |
| SEC | Securities and Exchange Commission |

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| | |
|---|---|
| CP | Corporate Tax |
| CP | Corporate Profit |
| FZ | Firm Size |
| FL | Financial Leverage |
| CFO | Cash Flow from Operation |
| LOSS | Unprofitable Companies |

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# CHAPTER ONE
# INTRODUCTION

## 1.1 Background of the Study

The business activities of quoted companies are very important for the public, specifically, and the nation, generally, because companies provide the goods, services and resources to meet their needs (Kehinde & Olanrewaju, 2010). Those quoted companies attract investors capital for further improvement. Investments in listed companies are expected to yield good returns which in turn benefit investors and economy of the nation. Good yield returns of the firms motivate investors to invest capital in listed firms because investors are always profit seekers and they are ready to invest in any economy, but there is problem of panic or uncertainty of losing their investment due to accounting policies, inadequate regulations or provisions that regulate the financial activities in the economy (Kajola, 2008). For the success of investments in the Nigerian economy, the government is expected to make good policies and regulations that guarantee good financial reporting atmosphere that will guarantee safety, profit and security for the investors in order to institutionalize their confidence (SEC Code, 2011).

Most investors and other stakeholders have interests in financial reporting because financial reporting contains information about earnings from their investments. Reported investments earnings are considered to be of valued relevance by the shareholders in estimating future investment returns (Das &

Kim, 2013), but where reported earnings are managed for future benefit financial analysts can find out the effect of earnings management if it is included in future earnings forecast through large accruals (Abarbanell & Lehavy, 2003).

Earnings management can be seen either as a booster or a destroyer of a firm's earnings quality (Hui & Fatt, 2007). Healy and Wahlen (1999) define earnings management as "*when managers use judgment in financial reporting in structuring transactions to alter financial reports, to either mislead some stakeholders*". Earnings management can be good which can boost the company's earnings, and also can be bad, which destroys company's earnings quality. Kin (2008) groups earnings management into two categories: real-based earnings management and accrual-based earnings management. Real-based earnings management has to do with manipulation of real activities, such as reducing discretionary expenditure; while accrual-based earnings management is the alteration of accruals or revisal of accruals through changes of accounting estimation. Real-based earnings management has a direct effect on the cash flow, while accrual-based earnings management has no direct effect on the cash flow (Roychowdhury, 2006). Managers use either of the methods to manipulate income to boost firms' earnings and report unrealistic figures in the financial report. There are many methods of estimating discretionary accruals as a proxy for earnings management such as Jones (1991) model, Modified Jones (1995)

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model, Dechow and Dichev (2002) model and Kothari, Leone and Wasley (2005) model. The Modified Jones Model (1995) is commonly employed to estimate discretionary accruals because it is a model that best estimates discretionary accruals (Fodio, Ibikunle, & Oba, 2013).

Financial reporting concern arises when there are conflicts of interest between managers and investors coupled with agency problems, for example, information asymmetry, among others (Pandey, 2005). Information asymmetries occur when one party (agents or managers) in the contract has more knowledge and critical information required in the contract than outsiders/investors (Pandey, 2005). Agency relationship arises in any situation involving the cooperative effort of two or more people (Adelegan, 2009). The relationship between the stakeholders, who are the holders of the investments and the upper management, is purely an agency relationship. If agency problems do not exist, financial reporting quality is a non-issue since managers do not have any incentive to misreport information (Jensen & Meckling, 1976) over certain important agency issues, such as information asymmetries.

Information asymmetry may lead to the loss of investments. For example, investors have been concerned with the collapse and scandals of giant companies, such as Enron, WorldCom and Xerox in developed countries because they suffered investment losses (Fodio *et al.*, 2013). In addition,

many shareholders lost their trust in the managers and audit firms in the affected firms worldwide (Watts & Zimmerman, 1990).

In Nigeria, corporate scandals have involved large companies, such as African Petroleum PLC, Cadbury Nigeria PLC and Lever Brothers PLC (Ajibolade, 2008; Miko & Kamardin, 2015). An investigation conducted by the Central Bank of Nigeria (CBN) into the activities of the 24 listed banks in 2009 revealed that most of the banks were about to collapse due to earnings manipulation, scandals, reckless management and poor corporate governance. The CBN injected N420 billion ($2.8 billion) into the first five banks (Afribank, Finbank, Intercontinental Bank, Oceanic Bank and Union Bank) which had failed the CBN audit. An additional N200 billion ($1.33 billion) was injected to stimulate the liquidity of four other banks, namely Bank PHB, Equatorial Trust Bank, Spring Bank and Wema Bank. This was done in order to stabilize and protect the banks from distress and to ensure the banks remained going concerns. To forestall future occurrences of such scandalous events, the CBN had to sack its Managing Directors for lack of proper financial management and sound corporate governance practices (Njanike, Dube, & Mashayanye, 2009).

Similarly, the Nigeria Deposit Insurance Corporation (NDIC, 2014) reported that the number of fraud cases had increased from 1,764 in 2009 to 3,380 in 2012 in Nigeria which is a serious case of fraud affecting the business

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environment. The bankruptcy of these (Enron, WorldCom and Xerox e.t.c) giant corporations, both locally and internationally, stemmed from influencing earnings, fraud and weak corporate governance practices of Chief Executive Officers (CEOs) (Fodio *et al.*, 2013). Government intervention in regulating the environment ensures sanity in the affairs of managers and increases the level of confidence of investors. Li, Pincus and Rego (2008) argue that a government that enforces regulations might succeed in generating disclosures that would help firms, managers and investors in making decisions. Introducing corporate governance code is a way a government can regulate, supervise and check the activities of the corporations. Roodposhti and Chashmi (2010) posit that the role of corporate governance is to reduce the divergence of interests between investors and managers. Such divergence of interests will reduce the level of earnings management through the use of accounting manipulation. Mostly, companies' failure is the result of the weak effect of governance and financial reporting, because of improper financial disclosure and earnings manipulation (Fodio *et al.*, 2013).

Regulating the business environment in Nigeria has a long history. Nigeria inherited many rules and regulations from the colonial government, such as the British Company Legislation and Company Ordinance of 1922. After independence, there was the Companies Act 1968 (Okike, 2007). Subsequently, the following laws were put in place: Indigenization Policy of

1972; Privatization and Commercialization Act 1980; Insurance Act (IA); National Insurance Commission Act of 1977; Bank and Other Financial Institutions Act (BOFIA); Company and Allied Matters Act 1990 (CAMA 90); Investments and Securities Act (ISA); CBN Act; and the Nigerian Stock Exchange 1960.

Furthermore, several general and specific corporate governance codes were introduced to tackle the problems in the Nigerian business environment. The first corporate governance code was the Securities and Exchange Commission (SEC) Code 2003; the others are CBN Code 2006; Pension Commission (PENCOM) Code 2008; National Insurance Commission (NAICOM) Code 2008; Securities and Exchange Commission (SEC) Code 2011; and Financial Reporting Council of Nigeria (FRCN) Code 2013. The SEC Code (2011) is for listed firms; while the FRCN Code 2013, is generally for the listed and non-listed firms in Nigeria.

The Board of Directors, as part of the corporate governance mechanism, is an important body responsible for overseeing the managers' actions (SEC Code, 2011). Board characteristics are believed to influence actions of management towards earnings management. Board independence, CEO duality and directors' shareholdings are some of the board mechanisms that measure the board's influence in reducing earnings management (Dey, 2008; Marra, Mazzola, & Prencipe, 2011).

Another important player in overseeing the financial statement quality is the audit committee. Issues in the audit committee are complex and technical in nature. Members need technical skills and specialized knowledge in auditing and financial systems to autonomously assess the significance of the issues presented to them (Mcdaniel, Martin, & Maines, 2002). Financial expertise in audit committee, audit committee independence and audit committee size are some of the audit committee mechanisms that play a vital role in curbing earnings management (Carcello, Hollingsworth, Klein, & Neal, 2006; Goh, 2009; Vafeas, 2005). Several studies, such as Carcello *et al.*(2006); and Fodio *et al.*(2013) have used financial expertise in audit committee, audit committee independence and audit committee size to determine how these variables affect earnings management and have revealed significant results. The present study has chosen to use the same variables to assess their effect on earnings management.

Furthermore, other firm characteristics associated with influencing managers not to embark on earnings management are considered in this study. Firm characteristics are seen as "*pre-doctor guideline of quality disclosure*" (Rahman & Widyasari, 2008). These factors are corporate tax and corporate profit expenses. They are important instruments to the managers when planning to manipulate earnings upwards. Managers must be cautious with these firm characteristics because of their chain effects on the firm's capital.

Apart from the board and audit committees' control, firm characteristics are believed to be very important in controlling managers' actions in earnings manipulation. In the event where managers engage in a systematic upward manipulation of earnings, firms have to pay more tax liability and more dividends to the stakeholders. Firm characteristics can serve as indirect control factors that can discourage managers from reporting unrealistic earnings.

Institutional investment/ownership is the ownership of other corporate institutions or organizations, such as banks and investment firms (Koh, 2003). The issue of institutional investment needs to be considered in the investment arena in Nigeria. Institutional investors will take extra effort to make sure their investments are secured and efficient (SEC Code, 2011). Institutional investors have an effect on financial reporting quality through good representation in the audit committee.

Several previous studies have reported that institutional ownership has impacted positively in reducing earnings management (Ferreira & Matos, 2008; Koh, 2007; Lefort & Urzúa, 2008); however, the moderating effect of institutional ownership between corporate governance and earnings management is yet to be known.

## 1.2 Problem Statement

Managers use earnings management to increase/decrease the reported earnings; for example, managers use different earnings management methods in order to meet the target, i.e., to avoid reporting losses annually (Cohen & Zarowin, 2010). Usually, this kind of earnings management (using accruals) lasts for short time; in the subsequent periods, earnings will go down due to accounting manipulations (such as change of accounting transaction from one accounting period to another or alteration of the accruals) which will have a negative effect on the owners of businesses (Lev, 2003). Among the negative effects are bankruptcy, capital shortage and fraud. For example, In 2009, the CBN revealed that banks in the country were at the verge of collapse (Afribank, Finbank, Intercontinental Bank, Oceanic Bank, Union Bank, BankPHB, Equitorial Trust Bank, Spring Bank and Wema Bank) because they failed audit tests due to capital shortage (Njanike *et al.*, 2009).

Most of the failed banks were in the top list of the most capitalized listed firms on the Nigerian stock exchange in 2008. The list shows that Oceanic Bank with N267.767 billion naira capital, Intercontinental Bank plc with N243.055 billion naira capital, Bank PHB plc with N206.387 billion naira capital and Wema Bank with N145.562 billion naira capital were in sixth, seventh, ninth and sixteenth position respectively but suddenly taken them over by Ecobank international and Access Bank in 2012 (Foyeke, Olajide,

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Oluku, & Kolade, 2016). It is clearly shown that the financial report presented to the public by these firms is not representing their true color because these banks are shown in the most capitalized listed firms but unexpectedly collapse which is a clear agency issue that needs to be addressed in order to restore confidence to the investors.

Similarly, the case of African Petroleum PLC, Lever Brothers PLC and Cadbury Nigeria PLC, are among the most concerned corporate frauds in Nigeria (Ajibolade, 2008). The NDIC reported that the number of fraud occurred in Nigeria fluctuate from 2008 to 2012. Table 1.1 shows the fluctuation of the financial fraud in Nigeria.

**Table1.1**
***Financial Fraud 2008-2012***

| Year | Number of Fraud | Percentage of Fraud |
|---|---|---|
| 2008 | 2007 | 18.2 |
| 2009 | 1764 | 16 |
| 2010 | 1532 | 13.9 |
| 2011 | 2352 | 21.3 |
| 2012 | 3380 | 31 |
| Total | 11035 | 100% |

*Source: NDIC Report (2014)*

Table 1.1 reports that the number of financial fraud has decreased in Nigeria from 18.2% in 2008 to 13.9% in 2010, and increased to 31% in 2012. The financial fraud cases are usually motivated by internal (such as managers want to earn rewards) and external forces (short time investors want to sell

their stocks) to meet the target (Foyeke *et al.*, 2016). Managers report good performance in order to get the rewards from investors and some short-time investors force managers to produce a good performance in order to get higher returns for their stocks. This is an agency issue that is seriously leading to the collapses of corporations and eradicates investors confidence on the reported financials.

These issues of bankruptcy, capital shortage, and fraud affecting investors' confidence in financial reports presented by the managers require urgent government policy intervention to restore confidence to the financial reports users.

The introduction of governance mechanisms (Code, 2003) in Nigeria is expected to mitigate corporate scandals and other associated problems. However, corporate failures and scandals are increasing. For example, Wema Bank PLC and Spring Bank PLC in Nigeria (cases of mismanagement of capital) were the victims of poor corporate governance practices (Demaki, 2011). Poor corporate governance and other issues raised alert about the ineffectiveness of the CG code 2003 which lead to the introduction of another CG code.

A committee was established to review the Corporate Governance Code 2003 for further improvement. After the review, a few new issues were

raised. For example, differentiating between independent directors and executive directors, training of directors, evaluation of the board's performance by an independent outside consultant and separation of functions of a chairperson of the board and the CEO. The new amendments were included in the new code (2011) to further improve on the previous code short-comings and the quality of the financial report. Two years after Financial Reporting Council of Nigeria see that there is the need to introduce unified CG code for every company operating in Nigeria.

Another similar code was launched in 2013 by the FRCN, which harmonized all corporate governance codes in Nigeria. This new code is applicable to all firms, whether quoted or unquoted, private or public. The corporate governance code of FRCN 2013 was introduced to enhance earnings quality of financial reporting through the new provisions provided to enhance the previous CG Code's shortcomings. All these policies introduced or amended time to time are to regulate opportunistic actions taken by managers so as to minimize agency problems and enhance financial reporting quality.

The links between corporate governance and earnings management have been discussed in developed countries (Berthelot, 2012; Chang & Sun, 2010; Demirkan & Platt, 2009; Iyengar, Land, & Zampelli, 2010; Jiang & Anandarajan, 2009; Machuga & Teitel, 2007; Oei, Ramsay, & Mather,

2008; Sivaramakrishnan & Yu, 2008). Emphasis is placed on specific corporate governance mechanisms, such as concentrated shareholding (Han, 2004); board independence (Petra, 2007); directors' shareholding (Kamardin, 2014; Sánchez-Ballesta & García-Meca, 2007); and auditors' reputation (Agrawal & Chadha, 2005). Evidence shows that a lot of researches were conducted on the effects of corporate governance on earnings management which covered many different areas with mixed findings in developed countries. The mixed findings could be due to the dissimilarities in socio-economic, culture and political environmental which attract more research to be carried out especially in developing countries that have their peculiar socio-economic, cultural and political environmental.

Researchers attention has been focused on the study of corporate governance and earnings management in emerging economies which are quickly developing and have distinctive corporate control features and regulations (Dimitropoulos & Asteriou, 2010). However, in developing countries (including Nigeria), there are very few studies in this area. Nigeria has experienced corporate failures due to manipulating earnings, fraudulent practices by the directors and weak corporate governance mechanisms (Fodio *et al.*, 2013).

Further, research needs to be conducted in Nigeria to find out solutions that suit the Nigerian environment, and which can enhance the quality of earnings and reduce future corporate failures that will attract more investors from the world to utilized and processed Nigerian resources. Nigeria has all the potentials to accommodate investors from any part of the world because Nigeria is blessed with plentiful natural resources such as land for agriculture, underground natural resources (gold, oil and gas, etc), and human resources (intellectuals, working class, politicians, etc) (Nigeria Corporate, 2007), with Gross Domestic Product per capital of 2548.20 dollars in 2015 which is equivalent to 20 percent of the world average (World Bank, 2016).

Some of the studies conducted in Nigeria on corporate governance and earnings management (Hassan & Ahmed, 2012; Miko & Kamardin, 2015; Miko & Kamardin, 2016; Musa, Oloruntoba, & Oba, 2014; Uwuigbe Uwuigbe, Ranti, & Bernard, 2015) using different variables and reported the mixed result. The present study introduced institutional investors as a moderator to the audit committee in order to enhance the audit committee efficiency in regulating opportunistic activities.

The aim of the Board of Directors, as a mechanism of corporate governance, is to oversee firm managers' activities. Control by the Board of Directors can increase transparency and reduce earnings management behavior of

managers. Beasley (1996) finds that the presence of outside directors reduces the possibility of fraud. Klein (2002); and Xie, Davidson and DaDalt (2003) find that firms with independent boards are less likely to report abnormal accruals. Fodio *et al.* (2013) find that board independence has a negative association with discretionary accruals. CEO duality influences the decisions of the board. Rechner and Dalton (1991) find that the financial returns of firms without CEO duality consistently outperformed those with CEO duality. Chang and Sun (2009) stated that the association between CEO duality and earnings informativeness after the Sarbanes-Oxley Act 2002 (SOX, 2002) is negative. Mohamad, Rashid and Shawtari (2012) find the separation of chairperson and CEO in the companies has a negative impact on earnings management activities. The impact of directors' shareholdings can be seen in Beasley (1996), i.e., the possibility of financial report fraud decreases with the ratio of shares owned by outside directors. Bhagat and Bolton (2013) find that firms with the maximum levels of audit committee stock ownership have higher performance than firms with lower levels of ownership. Rose, Mazza, Norman and Rose (2013) find that directors who own stock are less inclined to agree with management's hostile reporting.

The revised Code 2011 shows the regulators' intention to enhance the role of the audit committee by providing financial expertise and independence. Evidence shows that financial expertise in the audit committee improves the

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committee's quality. Bedard, Chtourou and Courteau (2004); and Carcello *et al.* (2006) reveal that the presence of at least one financial expert will decrease the possibility of destructive earnings management. Marra *et al.* (2011) find that financial expertise on the audit committee has a negative association with earnings management. Audit committee independence influences the quality of reported earnings because independent directors cannot compromise the process. Carcello and Neal (2000) document a relationship between audit committee independence and the quality of the financial report. Klein (2002); and Xie *et al.* (2003) find that audit committee independence has a negative relationship with misstatement and earnings management. Chang and Sun (2010) report that markets respond positively to the adoption of a fully independent audit committee after SOX Act, 2002. Fodio *et al.* (2013) disclose that audit committee independence has a positive association with discretionary accruals.

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Audit committee size helps to improve the audit committee's power in an organization (Kalbers & Fogarty, 1993). A larger audit committee is more likely to improve the quality of internal controls than a smaller one because larger resource allocated to the committee will increase their capacity to perform better and it will make the audit committee more effective in fulfilling its monitoring role.

This study considers institutional investment as the interacting variable because of the power of the institutions to control abnormality through their representation in the committee (Koh, 2003). Institutional investment is the investments of other corporate institutions, such as financial institutions (Koh, 2003). Institutional investment/ownership is the moderating variable in the relationship between audit committee and discretionary accruals. Institutional ownership moderates audit committee only because the audit committee is responsible for monitoring the financial reporting process. Having institutional owners in the audit committee will not allow manipulation of earnings, whereas the board of directors' role is to oversee general leadership of the firm (Tricker, 2012).

Institutional investors place more controls in the investee organization through their representation in the audit committee in order to safeguard their investments (Siregar & Utama, 2008). Many studies have shown a positive impact of institutional ownership in reducing earnings management. Cheng and Reitenga (2009) report that institutional blockholders exercise their monitoring power when there is pressure to boost earnings. Ferreira and Matos (2008) examined the institutional investors' role around the world and reveal that firms with higher institutional ownership have higher firm value, higher operating performance, and lower capital expenditure. Institutional ownership serves as a moderator in this study, the outcome will

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most likely be to reduce earnings management due to the extra control placed on the audit committee.

Firm characteristics are considered as factors that indirectly control managers' opportunistic behaviors. These factors (corporate tax and corporate profit) influence managers' decision to manipulate earnings. In a nutshell, managers may decide to manipulate earnings to mislead stakeholders but issues like tax and profit must be considered. Where earnings are inflated, profit will increase, leading to tax and dividend increases, which in turn, become agency cost.

A few studies (such as Fodio *et al*., (2013)) have been undertaken in Nigeria on corporate governance and earnings management; however, many questions remain unanswered. For example, 'Is the CG Code not effective in monitoring corporate failures and financial fraud? Does institutional ownership have an impact in controlling earnings manipulation? What are the contributions of firm characteristics in reducing earnings management?'. No study has studied the effect of institutional ownership in moderating the relationship between audit committee and earnings management and firm characteristics and earnings management. The type of a company's ownership has a great impact on the audit committee's control, leading to empirical questions being raised, which this study addresses.

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## 1.3 Research Questions

The research questions that this study answers are:

1. What is the extent of earnings management practice under the pre- and post- Corporate Governance Code 2011?
2. What is the relationship between the board of directors' mechanisms (Board Independence, CEO duality and Directors Shareholdings) and earnings management practice?
3. What is the relationship between the audit committee mechanisms (Financial Expertise in Audit Committee, Audit Committee Independence and Audit Committee Size) and earnings management practice?
4. What is the relationship between firm characteristics (corporate tax and corporate profit) and earnings management practice?
5. Does institutional ownership moderate the relationship between audit committee mechanisms and earnings management practice?

## 1.4 Research Objectives

The central objective of this study is to examine the association between corporate governance mechanisms and earnings management practice; and the moderating effect of institutional ownership on audit committee and firm characteristics (corporate tax and corporate profit) on earnings management practice in the Nigerian listed firms. The specific objectives are as follows:

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1. To examine the extent of the earnings management practice under the pre- and post-Corporate Governance Code 2011.
2. To examine the relationship between the board of directors' mechanisms (Board Independence, CEO duality and Directors Shareholdings) and earnings management practice.
3. To examine the relationship between the audit committee mechanisms (Financial Expertise in Audit Committee, Audit Committee Independence and Audit Committee Size) and earnings management practice.
4. To examine the relationship between firm characteristics (corporate tax and corporate profit) and earnings management practice.
5. To examine the moderating effect of institutional ownership on the relationship between audit committee mechanisms and earnings management practice.

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### 1.5 Scope of the Research

The population of this study is limited to all listed non-financial firms in the Nigerian SEC as at December 31, 2013 for the period of 2009-2013. Financial firms are not considered because they are heavily regulated by other industry-specific CG Codes. The time period is considered very suitable for the study because: it is expected that the firms have fully complied with the CG Code; and the availability of data in the annual financial reports of the companies. The sample of the study comprises 81 non-financial listed firms in Nigeria.

The study is limited to examining the effect of corporate governance mechanisms on earnings management. Earnings management (discretionary accruals) serves as a dependent variable of the study because discretionary accruals are the basis for earnings manipulation. The study uses six CG mechanisms: board independence, CEO duality, directors' shareholdings, financial expertise in the audit committee, audit committee independence, audit committee size and two other firm characteristics - corporate tax and corporate profit, as independent variables to test their reaction to discretionary accruals. Institutional ownership serves as a moderator, between audit committee variables and earnings management due to its power and ability to control irregularities.

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The study used Modified Jones Model (1995) to estimate discretionary accruals as the proxy for earnings management. Board independence is the proportion of non-executive directors to the total directors on the board. CEO Duality is a dummy variable, with '1' if the CEO is the chairperson of the board, otherwise '0'. Directors' shareholdings are the stocks owned by the directors to the total shares. Financial expertise in the audit committee is the proportion of audit committee directors with at least one year's financial experience to the total number of directors in the audit committee. Audit committee independence is the proportion of non-executive audit committee members to the total audit committee members. Audit committee size is the

number of directors in the audit committee. Institutional ownership is the proportion of shares owned by the institutional owners to the total number of shares issued by the firm. Corporate Tax is the natural log of the current year's tax. Company Profit is the natural log of the current year's profit.

Theories that underly the study are the agency theory, political cost theory and ethical theory. The agency theory links corporate governance variables and predicts that earnings management will be reduced. Corporate profit is guided by ethical theory with the prediction that earnings management will reduce if managers behave ethically. Corporate tax is guided by political cost theory.

### 1.6 Significance of the Research

This research contributes to the extension of the literature on earnings management using data obtained in Nigeria. The contribution of this research can be viewed from the theoretical, practical and methodological perspectives.

Theoretical significance can be traced in three ways: First, the study investigates the association between corporate governance and earnings management using board independence, CEO duality, directors' shareholding mechanisms, moderating effect of institutional ownership on the association between audit committee and earnings management in an emerging economy (Nigeria) which has not been conducted before using the

following variables: financial expertise in the audit committee; audit committee independence; and audit committee size.

Despite the fact that there are many studies on corporate governance and earnings management (Berthelot, 2012; Chang & Sun, 2010; Demirkan & Platt, 2009; Fodio *et al.*, 2013; Iyengar *et al.*, 2010; Jiang & Anandarajan, 2009; Liu & Sun, 2010; Machuga & Teitel, 2007; Oei *et al.*, 2008; Sivaramakrishnan & Yu, 2008), to the knowledge of the researcher, no study has filled the above mentioned gap.

Second, the study investigates the extent to which firm characteristics affect earnings management in an emerging economy (Nigeria), using the following variables: corporate tax and corporate profit. This study aims to show the manner in which these firm characteristics influence managers not to manipulate earnings.

Third, the present study provides the comparison between the quality of financial information of firms with the effect of institutional ownership (with moderating effect) and those without the effect of institutional ownership in their financial information (without moderating effect).

Practical significances of this study can be observed in three ways: Firstly, regulators will find the findings of the present study very useful for future

governance policy formulation in Nigeria and other countries. Secondly, the study's findings would be useful to the investors who are always in search of information that will enable them to make good investment decisions. Thirdly, the study will benefit other researchers and academia in determining the position of several CG mechanisms in their attempt to find solutions to the conflict of interest between shareholders and management. To the managers, it can be used as a guide for improving the quality of reported earnings.

From the methodological perspective, this study will come in very handy, as modified new measurements of determinant variables are achieved in the study using natural log of the current year's value of corporate tax and corporate profit. Previous researchers have used return on assets (ROA) or return on equity (ROE) to measure performance, while this study uses log value of the current year's profit to measure the influence of corporate profit on earnings management. Furthermore, past studies have used tax rate, deferred tax or mathematical models for measuring aggressive tax reporting (Frank, Lynch, & Rego, 2009)' whereas this study employs the use of log value of the current year's tax to measure the influence of corporate tax on earnings management.

### 1.7 Organization of the Thesis

This study is organized into five chapters. Chapter One comprises introduction of the study followed by problem statement, research

objectives, research questions, scope of the research and significance of the research. Chapter Two reviews related literature comprising definitions of earnings management, corporate governance mechanisms and related theories. Chapter Three discusses the conceptual framework of the study, hypotheses formulation and the methodology of the research. Chapter Four discusses the data analyses and discussions, while Chapter Five presents the summary and conclusion as well as recommendations.

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# CHAPTER TWO
# LITERATURE REVIEW

## 2.1 Introduction

This chapter reviews the literature on the definitions, nature, types and measurements of earnings management, corporate governance as well as theoretical frameworks that underlie the study. Finally, the chapter also reviews the findings of previous research on corporate governance and earnings management.

## 2.2 Earnings Management

Earnings management has many definitions due to its receiving the attention of researchers, investors and practitioners. There is no consensus on a single definition for earnings management (Beneish, 2001) because there are many ways of defining it (Healy & Wahlen, 1999; Healy, 1985; Meek & Thomas, 2004). For example, earnings management is considered as management measures, which decrease the quality of the reported earnings (Kinney, Palmrose, & Scholz, 2004). Fields, Lys, and Vincent (2001) explain that earnings management happens when managers make a judgment over the accounting figures. Managers will engage in earnings management only if they believe that users of accounting information cannot completely adjust the accounting information to remove the effect of earnings management. Earnings management leads to lower earnings quality as it reduces the predictive ability of future earnings and cash flows (Lev, 2003), to the extent

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that earnings are managed to mislead investors, which is generally considered as unethical (Siregar & Utama, 2008).

Schipper (1989) defines earnings management as, "*the process of taking deliberate steps within the constraints of Generally Accepted Accounting Principles (GAAP) to bring about the desired level of reported income*" (p.92). Earnings management is also seen as, "*an intentional structuring of reporting or production/investment decisions around the bottom line impact*" (Hui & Fatt, 2007). Dechow and Skinner (2000) see it as "*an intentional manipulation or opportunistic action of reported measures from the unbiased amounts to achieve and lead to incorrect decisions by investors and others*" (p.8). Healy and Wahlen (1999) state that, "*earnings management occurs when managers use judgment in financial reporting in structuring transactions to alter financial reports, to either mislead some stakeholders about the underlying economic performance of the company or to influence contractual outcomes that depend on reported accounting*" (p.386).

Based on the above definitions, it is clear that earnings management can be used positively as it is provided by GAAP to improve economic performance of a firm as shown by Schipper (1989). It can also be used in a negative way to increase the economic performance which may lead to the

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poor quality of the real economic performance of a firm (Healy & Wahlen, 1999). This study adopts the definition of Healy and Wahlen (1999).

Several preceding studies have investigated whether or not earnings management exists in firms' financial report (Burgstahler & Dichev, 1997; DeAngelo, DeAngelo, & Skinner, 1994; Dechow, Sloan, & Sweeney, 1995; Healy, 1985). Some studies have attempted to find out the earnings management types (Beneish, 2001; Siregar & Utama, 2008); some have looked at the earnings management motives (Healy & Wahlen, 1999); factors similar to reward of management incentives of contract (Dechow & Sloan, 1991; Guidry, Leone, & Rock, 1999); motivation of regulators to earnings management (Key, 1997); motivation of capital market to earnings management (Teoh, Welch, & Wong, 1998); and incentives of external contract (Watts & Zimmerman, 1986). Studies show clearly that earnings management exists in firms' financial report, and research on earnings management has existed for a long time with different findings.

Researchers have established that earnings management exists in financial reports where efficient earnings management colors the reported earnings; while opportunistic earnings management (which is the main focus of the present study) destroys the reported financials. The main difference between efficient and opportunistic earnings management is the destructive nature of the accounting reports by the opportunistic method, which often misleads

owners. Earnings management happens in three ways: by the use of certain income structuring and/or transaction of expense; by changes of accounting procedures; and by the use of accruals management (Mcnichols & Wilson, 1988; Schipper, 1989). Out of these techniques of earnings management, accruals management is the most destructive to the accounting report's value because the shareholders are not aware of the amount of accruals (Mitra & Rodrigue, 2002).

Accruals are simply defined as the difference between the cash flow from operating activities and earnings. Accruals can be categorized into discretionary accruals and non-discretionary accruals (Rao & Dandale, 2008). Discretionary accruals are alterations to cash flows selected by managers, whereas non-discretionary accruals are accounting modifications to a firm's cash flows approved by the accounting standard-setting bodies (Rao & Dandale, 2008). The present study followed previous studies (Baxter & Cotter, 2009; Dechow & Dichev, 2002; Dechow *et al.* 1995; Fodio *et al.* 2013; Mohamad *et al.* 2012; Susanto & Pradipta, 2016) which used discretionary accruals as a proxy for earnings management.

The differences between theoretical definitions and categorizations of earnings management have shaped many opportunities for the researchers to investigate the practices, motivations and consequences of earnings management. Several studies have been conducted in the international arena

on earnings management with many different variables (Al-Fayoumi & Alexander, 2010; Al-Khabash & Al-Thuneibat, 2009; Burgstahler & Dichev, 1997; Cheng, Man, & Yi, 2013; DeAngelo *et al.*, 1994; Dechow *et al.*, 1995; Hamad, 2007; Healy, 1985; Kanagaretnam, Lobo, & Mathieu, 2003; Liu & Sun, 2010; Nelson, Elliott, & Tarpley, 2002; Perramon, Amat Salas, & Oliveras, 2013; Qarran, 2005; Roychowdhury, 2006; Song, 2013; Wongsunwai, 2013; Xie *et al.*, 2003; Yang & Bay, 2013). Studies in the local context (Nigeria) are very few, however, for instance, Fodio *et al.* (2013).

## 2.3 Opportunistic and Efficient Earnings Management

Studies have shown that efficient earnings management maximizes shareholders' wealth while opportunistic earnings management enhances management's private wealth (Mitra & Rodrigue, 2002). Similarly, previous studies have differentiated the two forms of earnings management (Balsam, Bartov, & Marquardt, 2002; Gul, Leung, & Srinidhi, 2000; Siregar & Utama, 2008; Yang & Krishnan, 2005). The main difference between efficient and opportunistic earnings management is the destructive financial report with unrealistic earnings in opportunistic earnings management method, while efficient earnings management method is terming private information to reflect in earnings.

Efficient earnings management is used by managers to enhance the quality of earnings through communicating private information to reflect the economic value of the firm, while opportunistic earnings management is used by managers within the constraint of "GAAP" to engage in aggressive reporting of accruals that harm the reported earnings (Siregar & Utama, 2008; Stubben, 2010). For example, Siregar and Utama (2008) report that companies listed on the Jakarta Stock Exchange engage in efficient earnings management which has positive and significant influence on future profitability. However, studies have indicated that the consequences of opportunistic earnings management are the same with efficient earnings management because they all have a significantly positive relationship with the future profitability of firms (Gul *et al.*, 2000; Siregar & Utama, 2008; Subramanyam, 1996; Yang & Krishnan, 2005).

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**2.4 Estimation Methods of Discretionary Accruals**

Previous studies have suggested various methods of estimating earnings management using discretionary accruals (Chang & Sun, 2010; Cohen, Dey, & Lys, 2008; Fodio *et al.*, 2013; Peasnell, Pope, & Young, 2005). Introducing different modes of detecting earnings management has to do with nature and environment because most of the countries have the peculiar method of manipulating earnings, so if one model is efficient to decompose total accruals into discretionary accruals and non-discretionary accruals in one environment, that same model may not be efficient in another

environment. The decision of adopting a particular model relies on the test and find the best that is friendly with the research environment. The most popular methods of modeling discretionary accruals are discussed below.

### 2.4.1 Discretionary Accruals Model of Healy (1985)

The Discretionary Accruals Model of Healy (1985) is the first model developed to estimate discretionary accruals. Its assumption is that the proxy for discretionary accruals is located at the point where non-discretionary accruals in the prediction period is zero. The underlying economic situations that change from time to time is linked to non-discretionary accruals (Kaplan, 1985). However, the Healy method is critical because it is impossible to have non-discretionary accruals at zero level in all the periods.

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### 2.4.2 Discretionary Accruals Model of DeAngelo (1986)

DeAngelo's Model estimates discretionary accruals by calculating the difference between total accruals at the present time and total accruals in the previous period. According to Kaplan (1985), non-discretionary accruals differ over time due to the changes in business activities. The biggest shortcoming of this model is benchmarking of accruals. DeAngelo considers the previous year as the benchmark for how accruals can be estimated. The model misclassifies non-discretionary accruals by adding it as discretionary accruals. Aljifri (2007) argues that the previous periods may include earnings management that may be used as a benchmark for expected accruals.

### 2.4.3 Discretionary Accruals Model of Industry (1991)

The Industry Model as proposed by Dechow and Sloan (1991) is based on the assumption of the Healy (1985) model, that the determinant of non-discretionary accruals is the same among firms in the same industry, rather than constant over the period; as such, non-discretionary accruals of each firm-year of the same industry are affected by the accruals of other firms within that industry. The method of estimating non-discretionary accruals is:

$NDAC_t / A_{t-1} = a + a_1$ industry median $(TAC/A_{t-1})$.

Where industry median $(TAC/A_{t-1})$ represents the median value of total accruals measured by lagged assets for all non-sample firms within the same industry for every year; a and $a_1$ are firm-specific parameters that are measured by regressing the following equation for each firm-year in the same industry: $TAC/A_{t-1} = a + a_1$ industry medium $(TAC/A_{t-1})$.

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### 2.4.4 Discretionary Accrual Model of Jones (1991)

Jones (1991) has come up with the proposed new model for estimating non-discretionary accruals. The model uses plant, properties and equipment (PPE) to control changes in non-discretionary accruals arising from the change of depreciation, i.e., change of firm's activities. Furthermore, the sales variable is used to control changes in non-discretionary accruals associated with working capital accounts which come from changes in the firm's economic condition. This model is created on the assumption that working capital accruals are related to changes in sales and depreciation is

related to assets. The following model is used to estimate the total/normal accruals:

$TAC/A_{it-1} = \alpha 1(1/A_{it-1}) + \alpha_2(\Delta REV_{it}/A_{it-1}) + \alpha_3(PPE_{it}/A_{it-1}) + \mu_{it}$

Where:

$TAC_{it}$= total accruals for firm i in year t.

$A_{it-1}$ = total assets for firm i in the previous year.

$\Delta REV_{it}/A_{it-1}$ = change in revenues from i in year t.

$PPE_{it}/ A_{it-1}$ = gross property and equipment for firm i in year t.

$\mu_{it}$ = error term for firm i in year t.

This discretionary accruals estimation as shown above is calculated using the difference between total accruals and the non-discretionary component of accruals, i.e., normal or expected accruals. The model is as follows:

$DA_{it}= TAC/A_{it-1} - [\alpha_1 (1/A_{it-1}) + \alpha_2 (\Delta REV_{it}/A_{it-1}) + \alpha_3(PPE_{it}/A_{it-1})]$.

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**2.4.5 Discretionary Accruals of Modified Jones Model (1991)**

In this model, accounts receivable are considered by Dechow *et al.* (1995) to developed the Modified Jones Model. Estimating normal accruals in the first stage is similar to the model of Jones (1991). In the second level (the event period), the changes in revenue are modified for a change in receivables. In the event period, normal accruals are calculated by multiplying the estimated coefficient of the changes in sales by the change in cash sales (change in revenues minus the change in accounts receivable) instead of the change in sales. The Modified Jones Model is stronger and better than the

Jones Model for estimating earnings management (Dechow *et al.*, 1995). In the estimation period, the normal accruals are:

$TAC/A_{it-1} = \alpha_1 (1/A_{it-1}) + \alpha_2 (\Delta REV_{it}/A_{it-1}) + \alpha_3 (PPE_{it}/ A_{it-1}) + \mu_{it.}$

In the event period are:

$DA_{it}= TAC/A_{it-1} - [\alpha_1 (1/A_{it-1}) + \alpha_2 (\Delta REV_{it}/A_{it-1} - \Delta REC_{it}/A_{it-1}) + \alpha_3 (PPE_{it}/ A_{it-1})]$.

Where ΔREC= is a change in accruals receivable for firm i in period t, and other variables are as previously defined.

### 2.4.6 Dechow and Dichev's (2002) Discretionary Accruals Model

Dechow and Dichev (2002) used the components of cash flow from operations related to the current accruals for the past, present and future cash flow to determine earnings management. The model is based on working capital accruals. The model description is as follows:

$\Delta WCC = \beta_0 CFL_{t-1} + \beta_1 CFL_t + \beta_2 CFL_{t+i} + \mu_t$

Where:

$CFL_{t-1}$= cash flow from last year,

$CFL_t$ = cash flow of the present year and

$CFL_{t+I}$ = cash flow of the future year.

This model is lacking in that it measures accruals at short time period only and does not measure accruals at long time period (Dechow, Hutton, Kim, & Sloan, 2012).

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### 2.4.7 The Performance Adjusted Discretionary Accruals Model (2005)

Kothari, Leone and Wasley (2005) reveal that firm performance has an important role in measuring discretionary accruals; they endorse that firm performance should be considered when measuring discretionary accruals. The outcome shows that performance-adjusted discretionary accruals measures improve the reliability of inference from earnings management. Some studies have argued that discretionary current accruals should be more susceptible to earnings management when compared to total discretionary accruals (Dimitropoulos & Asteriou, 2010; Jaggi, Leung, & Gul, 2009). The description of discretionary current accruals is as follows:

$DCA_{it} = CA_{it-1} - [\alpha_1 (1/TA_{it-1} + \alpha_2 (\Delta REV_{it} - \Delta REC_{it})/ TA_{it-1} + \alpha_3 (ROA_{it-1})]$.

Where current accruals (CA) are measured by net income before extraordinary items plus depreciation and amortization minus cash flows from operation scaled by lagged of the year's total assets.

### 2.4.8 Francis, Lafond, Olsson and Schipper's (2005) Discretionary Accruals Model

Francis, LaFond, Olsson and Schipper (2005) combined two approaches by employing the Modified Jones' (1995) and Dechow and Dichev's (2002) models to dichotomize the total accruals and current accruals into accounting fundamentals and non-accounting fundamentals in order to capture the abnormal accruals components. The lower the relationship between accruals and accounting fundamentals information, the lower the

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quality of earnings (Francis *et al.*, 2005). The description of the model is as follows:

$TCA = \beta_0 CFL_{t-1} + \beta_1 CFL_t + \beta_2 CFL_{t+1} + \beta_3(\Delta REV - \Delta REC) + \beta_4 PPE_t + \mu_t$

This model suffers innate estimation errors which are predicted part of residuals of the regression (Dechow *et al.*, 2012).

### 2.4.9 Stubben's (2010) Revenue Model of Earnings Management

Stubben (2010) reviewed other popular models, like Dechow *et al.* (1995); and Jones (1991) and found shortcomings in terms of misspecification of accruals.

He then developed his model by finding solutions to the other models' misspecification of accruals. The differences between this model (Stubben, 2010) and other models (Dechow *et al.*, 1995; Jones, 1991) are highlighted below.

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1. He considered receivables accruals than total accruals.

2. He considered receivables accruals as the functions of the change in reported revenue than the change in cash revenue (Dechow *et al.*, 1995).

3. He considered change in annual revenues: (a) change in revenue of first three quarters; and (b) change in fourth-quarter revenue. The summary of the revenue model is as follows:

$\Delta ARN_{it} = a + \beta_1 \Delta Re1\_3_{it} + \beta_2 \Delta Re4_{it} + \mu_{it}$ .....(1)

$$\Delta ARN_{it} = a + \beta_1 \Delta R_{it} + \beta_2 \Delta R_{it} * SIZEe_{it} + \beta_3 \Delta R_{it} * AGEe_{it} + \beta_4 \Delta R_{it} * AGEe\_SQ_{it} + \beta_5 \Delta R_{it} * AGRR\_P_{it} + \beta_6 \Delta R_{it} * AGRR\_N_{it} + \beta_7 \Delta R_{it} * AGRM_{it} + \beta_8 \Delta R_{it} AGRM\_SQ_{it} + \mu_{it} \quad .....(2)$$

Where:

*ARN* is the end of fiscal year accounts receivable;

*R* is the annual revenues;

*Re1_3* is the revenues of the first three quarters;

*Re4* is the revenues of the fourth quarter;

*SIZEe* is the natural log of total assets at end of fiscal year;

*AGEe* is the age of firm (years);

*AGRR P* is the industry-median-adjusted revenue growth (0 if negative);

*AGRR N* is the industry-median-adjusted revenue growth (0 if positive);

*AGRM* is the industry-median-adjusted gross margin at end of fiscal year;

*SQ* is the square of variable; and

Δ is the annual change.

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### 2.4.10 Discretionary Accruals Model of Dechow *et al.* (2012)

Dechow *et al.* (2012) modified Mcnichols and Wilson's (1988) extended by Dechow *et al.* (1995) model. This new model of detecting earnings management has better testing power for detecting earnings management than the former, and avoids misspecification of earnings management (Dechow *et al.*, 2012). This new model takes into consideration the reversal

of accruals from one period to another. According to Dechow *et al.* (2012), the advantages of Dechow's model are:

(1)- Integrating reversal improved testing power, if earnings management determinants are available in less than half of the total firm-years present.

(2)- The model takes care of the correlated missed variables bias. The summary of the model is given as:

$WCT\text{-}ACCT_{i,t} = a + bTIME_{i,t} + cTIME1_{i,t} + dTIME2_{i,t} + \sum f_k X_{ki,t} + \mu_{i,t}$

Where:

$WCT\text{-}ACCT_{i,t}$ = non-cash working capital

TIME = 1 for dummy variable in the periods during which hypothesized determinant of earnings management is present and othewise, 0.

TIME1 = 1 is the first year following an earnings management year and otherwise, 0.

TIME2 = 1 is the second year following an earnings management and otherwise, 0.

$X_k$ = is the control for non-discretionary accruals.

b = magnitude of the hypothesized earnings management.

a, μ impact of other determinants of discretionary accruals.

The models can be revised as the following:

**Jones Model:** $WCT\text{-}ACCT_{i,t} = a + bTIME_{i,t} + cTIME1_{i,t} + dTIME2_{i,t} + \int\Delta REV_{i,t} + \int PPE_{i,t} + \mu_{i,t}$

**Modified Jones Model:** $WCT\text{-}ACCT_{i,t} = a + bTIME_{i,t} + cTIME1_{i,t} + dTIME2_{i,t} + \int(\Delta REV_{i,t} - \Delta REC_{i,t}) + \int PPE_{i,t} + \mu_{i,t}$

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**Dechow and Dichev's Model**: $WCT\text{-}ACCT_{i,t} = a + bTIME_{i,t} + cTIME1_{i,t} + dTIME2_{i,t} + CFL_{i,t-1} + CFL_{i,t} + CFL_{i,t+1} + \mu_{i,t}$

**Kothari et al.'s Model:** $WCT\text{-}ACCT_{i,t} = a + bTIME_{i,t} + cTIME1_{i,t} + dTIME2_{i,t} + \int(\Delta REV_{i,t} - \Delta REC_{i,t}) + \int ROA_{i,t} + \mu_{i,t}$

**Francis et al.' Model:** $WCT\text{-}ACCT_{i,t} = a + bTIME_{i,t} + cTIME1_{i,t} + dTIME2_{i,t} + CFL_{i,t-1} + CFL_{i,t} + CFL_{i,t+1} + \int(\Delta REV_{i,t} - \Delta REC_{i,t}) + PPE_{i,t} + \mu_{i,t}$

Researchers have developed many methods for measuring discretionary accruals, in the case of Nigeria where earnings are more manipulated easily using credit sales than cash collected. The study selected Modified Jones Model (1995) because it is the most powerful model for detecting earnings management (Armstrong, Guay, & Weber, 2010; Dechow *et al.*, 1995), and is the most commonly used (Fodio *et al.*, 2013; Rahman & Ali, 2006; Uwuigbe *et al.*, 2014; Mohamad *et al*., 2012).

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### 2.4.11 Measuring Total and Current Accruals

Before estimation of discretionary accruals, current and total accruals must be calculated. Previous studies have provided two methods of estimating total accruals: (1): Traditional balance sheet method widely used before the advent of the cash flow method which was the commonly used method at the time (Dechow *et al.*, 1995; Healy, 1985; Jones, 1991; Peasnell, Pope, & Young, 2000).

Estimating total accruals is as follows:

Balance sheet approach:

$TAC_t = \Delta CA_t - \Delta CASH_t - \Delta CL_t + \Delta DCL_t - DEP_t$

Where:

$CA_t$ = current asset changes in year t.

$\Delta CASH_t$ =cash and cash equivalent changes in year t.

$\Delta CL_t$ = current liabilities changes in year t.

$\Delta DCL_t$ = debt change included in the current liabilities in year t.

$DEP_t$ = depreciation and amortization expenses in year t.

The balance sheet approach does not include non-current accruals (apart from amortization and depreciation expenses). Cash flow approach accounts for both non-accruals and accruals misplaced, non-current accruals, transfer accruals from current earnings to future earnings and not captured by the balance sheet approach.

(2). Cash flow approach method is the difference between earnings before extraordinary and operating cash flow (Huang, Mishra, & Raghunandan, 2007; Jaggi *et al.*, 2009; Klein, 2002; Rahman & Ali, 2006). Total accruals are estimated under the cash flow approach as follows:

$TAC_t = EBXI_t - CFO_t$

Where:

$EBXI_t$ = earnings before extraordinary and abnormal items in year t.

$CFO_t$= operating cash flow in year t.

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A comparative study conducted for both approaches by Hribar and Collins (2002) has discovered that the cash flow approach is more efficient compared to the balance sheet method in the case of merger and acquisition firms. Furthermore, Hribar and Collins (2002) disclose that balance sheet method is biased in estimating accruals for firms that have discontinuing operations that may have been viewed as discretionary items.

Another model for determining total accruals has been adopted by Dechow *et al.* (2012) which is also used widely to measure:

1. Accruals; and
2. Non-discretionary accruals.

The summary of the model is as follows:

$WCT\text{-}ACCT_{i,t} = (\Delta CUA_{i,t} - \Delta CUL_{i,t} - \Delta CASH_{i,t} + SHOTD_{i,t})/ A_{i,t-1}$

Where:

$WCT\text{-}ACCT_{i,t}$ = is the mearsurent of accruals.

$\Delta CUA_{i,t}$ = change in the current assets.

$\Delta CUL_{i,t}$ = change in the current liabilities.

$\Delta CASH_{i,t}$ = change in cash.

$SHOTD_{i,t}$ = total assets.

$A_{i,t-1}$ = total assets lagged by 1.

Note: Other researchers have taken depreciation into consideration in determining accruals, for example (Healy, 1985), but subsequently,

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researchers have dropped depreciation from the model and explain that depreciation is related to long-term capital expenditure accruals, and not working capital accruals (Allen, Larson, & Sloan, 2013).

## 2.5 Corporate Governance Development in Nigeria

Corporate governance, as previously noted, is very important in Nigeria and the rest of the developed, developing and under-developed countries' economy for the success of corporations. The history of corporate control, rules and regulations, and governance of commercial enterprises in Nigeria can be traced back to the colonial period, where total control was in the hands of colonial masters at the time of the departure. Nigeria inherited many rules and regulations left behind by the colonial government, for example, the British Company legislation and Company Ordinance of 1922, among others, was introduced into the Nigerian business environment. Since that period, Nigeria's corporate governance practices and legal structure began to adopt the United Kingdom (UK) model. After political independence, the Company Ordinance of 1922 was reviewed and replaced by the Companies Act 1968 (Okike, 2007).

Multinational Corporations control and dictate the activities of commercial enterprises. They also use foreign company legislations, because legislations in Nigeria have failed to address the companies' legal problems that are peculiar to Nigeria's social, cultural and political environment, and do not

address the rapid economic and commercial developments in Nigeria (Okike, 2007). The corporate governance system in Nigeria in that period was an "outsider controlled system" (Franks & Mayer, 1994), and a replication of colonial times.

In an attempt to reflect its peculiar socio-economic and political system in the legal system and to control the economy, the Indigenization Policy of 1972 was introduced with the following principles: the interest of the shareholders is supreme in the day-to-day activities of management; managers' priority is maximization of shareholders' wealth; the capital market helps to align the interests of management and their values as perceived by investors; company managers are accountable to the board of directors, who are in turn, answerable to shareholders; the rights and responsibilities of the key players in the corporate governance framework are embedded in statute; and the business rules must be applied in Nigeria as in other developed countries (Okike, 2007).

Subsequently, other laws and regulatory bodies were established: the Privatization and Commercialization Act 1980 came into effect in 1988 to execute the privatization and commercialization program of the Federal Government, which continues to this day. The Insurance Act (IA) sets standards for the insurance industry in Nigeria through the regulatory oversight of the NAICOM, which in turn is governed by the NAICOM Act

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of 1977, that ensures the effective supervision, regulations and control of the insurance business in the country. This Act authorizes the commission to establish ethical standards for the conduct of insurance business in Nigeria. In the wake of the collapse of banks in Nigeria in the late 1980s, the government instituted the BOFIA and imposed certain standards to govern employees and directors of banks. This is the first standard that deals with the attitude of bank directorships. The Investments and Securities Act (ISA) established the Securities and Exchange Commission (SEC) of Nigeria. The SEC is endowed with many functions, among which is to "protect the integrity of the Securities Market against abuses arising from the practice of insider trading".

The Company and Allied Matters Act 1990 (CAMA '90) was established to set a standard that is applicable to all companies operating in Nigeria, while BOFIA and ISA represent a specific reaction to the perceived problems in the industry. In CAMA '90, provisions are found in relation to the standards of corporate governance related to the management of the company, reporting requirements and the lapse functions of the audit process. The CBN established by the CBN Act is the central regulatory bank in Nigeria, which has been very strict with standards, particularly regarding persons who are appointed as chairperson, members of the board of directors and top management. It does not permit the practice of the board chairperson serving simultaneously as chairman/member of the board committee in Nigerian.

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The Nigerian Stock Exchange is another body that exercises control through its rules that govern the companies that have been allowed to trade their stocks and shares. The Exchange was established in 1960 as the Lagos Stock Exchange. The Stock Exchange listed securities on government stocks, industrial loans (debentures/preference) stocks and equity/ordinary shares of the companies. The market for ordinary shares of the Exchange consists of First and Second Tier-market. The First Tier-Market deals with sales of new shares while the Second Tier-Market deals with the existing shares.

Due to the complexity, uniqueness and the important roles played by modern corporations in the economic development of any nation, stakeholders' attention has turned to the issues of good corporate governance. Nigeria has followed the path of other developed countries, like the UK, the United States (US), Canada, France and Germany, to introduce the Corporate Governance Code. Nigerian corporate governance is concerned with the process of direction, supervision, control, self-regulation, policy compliance and leadership being in line with the status and jurisdiction of the Federal Republic of Nigeria (Yakasai, 2001). In June 2000, the Securities and Exchange Commission and Corporate Affairs Commission set up a joint committee consisting of 17 members of public companies in Nigeria, based on the need to align the Nigerian system with the international best practices of corporate governance. The committee

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comprises members selected from all sectors of the Nigerian economy, such as professional organizations, the private sector and regulatory agencies. The terms of reference of the committee are: to identify weaknesses in the current public companies' corporate governance practice in Nigeria; to review practices in other jurisdictions with a view to formulate best international practices in Nigeria; to make suggestions on necessary changes to current practices; and to review other issues connected to corporate governance in Nigeria. The committee submitted its report in April 2001 which contained recommendations on transparency and accountability of the management and boards of public companies. The final meeting on the review and amendments was held in February 2003, and the code was effected in October 2003 (SEC Code, 2003).

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Subsequently, many complaints and observations on its weaknesses were brought up. Among others, it was agreed that weak corporate governance has played a significant role to some corporate failures in Nigeria (Code 2008). During this period, several corporate governance codes were introduced, such as the CBN Code 2006, the NAICOM Code 2008 and PENCOM Code 2008, to address specific industry problems not addressed by the general code.

In September 2008, a committee was set up to review the weaknesses of the Corporate Governance Code 2003 and suggest mechanisms for

improvement and enforceability. The committee was given the terms of reference as follows: to find out weaknesses and constraints; to examine and recommend ways of effecting greater compliance; to advise on other issues relevant to promoting good corporate governance practices by public companies in Nigeria; and to align the code with international best practices (SEC Code, 2011).

The board of the SEC believes that the new code would guarantee the maximum standards of transparency, accountability and good corporate governance (SEC Code, 2011). The new corporate governance code took effect in 2011 (SEC Code, 2011).

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**2.6 Earnings Management and Corporate Governance**

Earnings management is viewed as detrimental to a firm's value (Jiraporn, Kim, & Davidson, 2008), and its impact is important in financial reporting quality. Information asymmetry between inside owners and outside owners is complex; therefore, it has the potential to decrease shareholders' wealth (Park & Shin, 2004), as the information will be less enlightening to shareholders (Teoh *et al.*, 1998). Thus, effective corporate governance mechanisms, such as an audit committee, board of directors and institutional ownership can diminish the information asymmetry and decrease the divergence between shareholders and managers.

A large body of academic literature has examined the effect of corporate governance mechanisms, such as board performance and monitoring roles (Abdul-Latif, Kamardin, Taufil Mohd, & Che Adam, 2013; Kamardin & Haron, 2011); board characteristics and ownership structure on earnings management (Akhtaruddin & Haron, 2010; Cornett, Marcus, & Tehranian, 2008; Dechow, Sloan, & Sweeney, 1996; Iqbal & Strong, 2010; Park & Shin, 2004; Sarkar, Sarkar, & Sen, 2006; Xie *et al.*, 2003); board composition and earnings management (DeFond & Jiambalvo, 1994; Marra *et al.*, 2011; Osma & Noguer, 2007; Siagian & Tresnaningsih, 2011); and board structure and earnings management (Brickley *et al.*, 1997; Conyon & Peck, 1998; Tosi, Katz, & Gomez-Mejia, 1997).

Some studies have focused on financial expertise in the audit committee and earnings management (Bedard *et al.*, 2004; Carcello *et al.*, 2006; Chang & Sun, 2009; Lin, Li, & Yang, 2006; Marra *et al.*, 2011; Mcdaniel *et al.*, 2002; Xie *et al.*, 2003); some on audit committee independence and earnings management (Akhigbe & Martin, 2006; Bryan, Liu, & Tiras, 2004; Carcello *et al.*, 2006; Chang & Sun, 2009, 2010; Fodio *et al.*, 2013; Petra, 2007); and others on audit committee size and earnings management (Sanjai Bhagat & Bolton, 2008; Fodio *et al.*, 2013; Rose *et al.*, 2013).

Other studies have discussed board independence and earnings management (Beasley, 1996; Klein, 2002b; Marra *et al.*, 2011; Osma & Noguer, 2007;

Peasnell *et al.*, 2000, 2005; Xie *et al.*, 2003); and CEO duality and earnings management (Anderson, Deli, & Gillan, 2003; Baliga & Moyer, 1996; Bliss, 2011; Chang & Sun, 2009; Cohen *et al.*, 2008; Gul & Wah, 2002; Mohamad *et al.*, 2012; Rechner & Dalton, 1991; Tsui, Ferdinand, & Gul, 2001).

The above shows that various research on corporate governance and earnings management have been carried out in various places using different variables and with different findings. Consequently, there is a need for more research to be carried out in the area, especially in developing countries, such as Nigeria, which have distinct features and control over corporate leadership.

## 2.7 Underpinning Theories

Numerous theories explain the association between the principal (owner) and agent (manager) in respect of their rights and obligations, how the conflict of interest develops between them and how such conflict of interest can be minimized. In this study, the relationship between board characteristics, audit committee characteristics, institutional ownership influence on earnings management and firm characteristics on earnings management are guided by agency theory, political cost theory, myopic institutional theory and ethics theory.

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### 2.7.1 Agency Theory

The agency theory is commonly accepted in the field of accounting and auditing and other social science fields, which explains widely the relationship between principal and agent and how the principal wants managers to maximize their wealth and how managers want to pursue their interests, which bring about agency problems.

The conflict of interests between investors and managers of businesses will exist because managers may make a decision based on their interests at the expense of the shareholders (Jensen & Meckling, 1976). Conflicts of interest between shareholders and managers always result in market reaction, which leads to agency cost of equity. Agency cost of equity is the loss of the business value, which affects the equity price in the market because of the loss in the business. The agency theory is a theory that establishes the relationship between shareholders and managers. Jensen and Meckling (1976) define the theory as the relationship that takes place when shareholders engage managers to perform some of their obligations for them. Agency cost arises because of the different interests to be pursued between managers and owners. Problems exist when the owner gives manager the authority of decision-making based on the trust that manager will pursue the goal of the shareholders. Managers may pursue different things apart from the principal's goals, which often lead to agency problems.

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The asymmetric problem exists between shareholders and managers due to information being known by the agent while it is unavailable to the shareholders. It is difficult for the shareholders to predict behavior and activities of their managers because managers can misrepresent the reports of the business activities entrusted to them by the shareholders. Managers deliver misleading information about the assets, liabilities and risks taken in the business in the process of earning profit before the contract ends.

Similarly, the second problem as stated by Jensen and Meckling (1976) is agency problems exist between owners and managers because of the differences of goals to be achieved. Agency cost rises because of the inherent clash of interest between shareholders and managers. Shareholders could diversify their investment while agents cannot diversify their human capital. However, this agency cost problem can be minimized if the owners reduce the divergence of their investment to other places and establish appropriate motivations for their managers. This could go a long way in regulating activities of the agents. Jensen and Meckling (1976) see agency cost as the sum of three expenses as follows:

1. Monitoring expenses by the shareholders: Deegan, Rankin and Voght (2000) refer to the money value used to ensure that managers act based on the shareholders' interest. Such cost includes, for example, corporate governance structure, audit committee's expenditure and any other expenditures incurred to limit unscrupulous behavior of managers.

2. Bonding expenses by the managers: It refers to benefit derived when managers make the decision for the benefit of owners.
3. Residual expense is the value that could be paid by the owners and managers if monitoring and bonding mechanisms fail to work. In other words, it is the agency loss arisen due to the action of managers, leading to a decrease in the shareholders' wealth due to conflict of interest between manager and shareholders. There is no doubt that the conflict between owners and managers could influence the quality of accounting information, which has a direct impact on the value of the company.

In an attempt to align the owner's and manager's interest, certain corporate governance mechanisms have been introduced. The central theoretical background of this study is the agency theory which is based on the assumption that regulators introduce corporate governance code to regulate agency problems arising as a result of the conflict of interest.

### 2.7.2 Political Cost Theory

Political costs are the costs, including taxes, tariffs, government subsidies, antitrust and regulations, enforced on a company that emanates from potential political actions (Watts & Zimmerman, 1978). Political cost theory is the theory that deals with political actions to regulate the business environment for the benefit of the nation. The links between corporate tax and upward earnings management can be guided by political cost theory. Watts and Zimmerman (1978) state the tax is imposed on the corporations

which serve as the income on the assumption that the more income one declares, the more the tax that will be paid as the case of the 1990 Persian Gulf crisis where the government imposed 40% tax on the excessive profit earned due to changes in oil and gas prices (Han & Wang, 1998).

### 2.7.3 Ethical Theory

The ethical theory of business submits that managers have reason to be honest, truthful and ethical in their business practices, and thus tend to follow a high standard of behavior. Some of the theoretical studies on the ethical behavior or corporate social responsibilities (Carroll, 1979; Donaldson *et al.,* 1995; Jones, 1995; Phillips, Pincus, & Rego, 2003) suggest that there is ethical imperative for a manager to "do the right thing". For example, if a company reported the huge amount of profit, the host community (operational environment) will look for more social responsibility expenditure from that company.

Similarly, reported corporate profit can be guided by ethical theory as some of these theoretical research (Carroll, 1979; Jones, 1995; Phillips *et al.,* 2003) suggest that managers "do the right thing" if the company reported large profit investors will expect more dividend pay. This will go a long way in discouraging reported unrealistic earnings.

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## 2.8 Review of Previous Studies

Good corporate governance mechanisms have a link to financial reporting quality in a way that the effective and active board mechanisms can minimize the opportunistic behavior of unscrupulous managers, hence protecting the interests of shareholders. This study reviewed studies that looked into the effectiveness of corporate governance instruments (e.g. board characteristics, audit committee characteristics and firm characteristics) and how they react to the earnings management process.

### 2.8.1 Board of Directors

Board functions can be seen as a dynamic procedure which includes a strategy that leads to policy-making and planning, monitoring, supervising executive performance and providing accountability, which forms the basis for reviewing strategy (Tricker, 2012). According to Tricker (2012), boards have four features: formulating corporate strategy which is the core purpose of the organization that establishes its core values and sets its long-term direction; policy making which is the rules, system and procedures spelled out by the board to monitor and restrain executive management; supervising executive activities, where the board uses financial measures and accounting systems as the primary means of monitoring the state of the enterprises and the performance of its managers; and accountability, where the board is accountable to the stakeholders.

Boards are in charge of corporate leadership (with no interference in day-to-day functions which are the duties of the CEO and senior executives); choosing and replacing the CEO; representing the shareholders' interest; giving advice to top management; and acting as a control mechanism (Zahra & Pearce, 1989).

According to the SEC Code (2011), the main duties of the board is to set firm's goals and make sure that set objectives are achieved, i.e., to make sure that financial and human resources are correctly utilized toward achieving the overall strategic goals of the firm effectively. Some of the other duties of the board as spelled out by the SEC Code are:

(a) Policy-making and overseeing the top management and business affairs;
(b) Preparing risk framework and management of risk;
(c) Appointment, remuneration, training and replacement of senior executives and board members;
(d) Overseeing internal control system adequacy and effectiveness;
(e) Maintenance of the firm's policy of communication, information and dissemination;
(f) Appraisal of the board members' and senior executives' performance;
(g) Maintenance of effective communication with shareholders;
(h) Maintenance of integrity of financial reports;
(i) Maintenance of ethical standards in the firm; and

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(j) Ensuring compliance with the laws of the land.

The structure and composition of the board of directors should be made up of mixed directors. The number of the directors on the board should be not less than five and the majority should be non-executive with at least one independent director.

Some of the boards of directors' mechanisms chosen by this study are board's independence, CEO duality and directors' shareholding. These variables are selected based on the previous studies' findings, most of which state that these variables significantly reduce earnings management.

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***2.8.1.1 Board Independence (BOIN) and Earnings Management***

Board independence means a majority of the board of directors are non-executive directors. The SEC Code (2011) states that the board must comprise executive and non-executive directors. For the board of directors to be considered as independent, the majority of the board members must be non-executive/independent directors. Some of the importance of the board of directors functions are to ensure the integrity of the financial accounting process, provide independent oversight of management performance and to hold management accountable to investors for their deeds (DeFond & Jiambalvo, 1994; Dichev & Skinner, 2002). However, for the board to be an effective monitor of management, they need to include outside directors as members, who are expected to perform autonomously of managers and to

bring a higher depth of experience to the firm (Cornett *et al.*, 2008). Board of directors are willing to develop a reputation in the labor market for their corporation, which depends on their performance in monitoring (Fama & Jensen, 1983). Carcello, Hermanson, Neal and Riley (2002) find evidence that independent directors are prepared to work diligently for a higher quality report in order to protect their image and to promote shareholders' interest.

Prior research that examined the association between the corporate governance mechanisms concerning the board of directors' independence and the extent of earnings manipulation, has found inconclusive results. This can be due to different research designs and empirical settings. It has been argued that boards are more effective in their monitoring when there are strong independent directors on the board (Beasley, 1996; Klein, 2002b; Peasnell *et al.*, 2000; Xie *et al.*, 2003). Beasley (1996) examined the inclusion of larger percentage of outside directors on the board of 75 fraud and 75 non-fraud firms using logit cross-sectional regression analyses for the period 1980-1991; the researcher found that the presence of outside directors reduced the possibility of fraud when presenting the financial statement during the period. The implication is that outside director is very important in monitoring management. Equally, Klein (2002) provides evidence regarding board independence and earnings management. The

study finds that companies with independent boards are likely to report fewer abnormal accruals.

Xie *et al.* (2003) studied the roles of the board of directors in preventing earnings management using discretionary current accruals as a proxy for earnings management. They used a sample of 282, companies for 1992, 1994 and 1996, using ordinary least squares (OLS) regression. The findings of the study reveal that the percentage of independent outside directors is negatively related to discretionary current accruals, signifying that independent boards are better in monitoring management actions than non-independent boards, as also supported by the studies of Marra *et al.* (2011); and Peasnell *et al.* (2005), both of which find that board independence provides an essential device for decreasing the extent of earnings management. Osma and Noguer (2007) disclose a positive association between board independence and lower earnings management. In addition, Akhigbe and Martin (2006) report the positive influence of the SOX Act 2002 on market estimation in financial service companies that have a majority independent board. Jaggi *et al.* (2009) examined whether independent boards provide effective earnings management monitoring in firms operating in the family ownership environment in Hong Kong. The results indicate that independent boards provide effective monitoring of earnings management. However, they find that the monitoring effectiveness of independent boards is moderate in family-controlled firms, which

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suggests that increasing the proportion of independent directors to strengthen board monitoring is unlikely to be effective in family-controlled firms. Dimitropoulos and Asteriou (2010) find that board independence is strongly associated with improved financial performance and stock returns and reduced use of earnings management to inflate earnings. Siregar and Utama (2008) also do not find evidence that firms with independent boards engage in informative earnings management.

Fodio *et al.* (2013) conducted a study to ascertain the extent to which certain governance dynamics in the code of good corporate governance for the Nigerian insurance industry can mitigate earnings management. The study finds that board independence has a negative association with discretionary accruals and suggests that the variable may reduce the extent of earnings management and contribute to higher reported earnings quality. Liu and Sun (2010) examined the interaction effect of board independence and auditor industry specialization on earnings management using of 18,513 firm-year observations from 1999-2010; they document evidence that board independence and auditor industry specialization are negatively related to the absolute discretionary accruals. Peasnell, Pope and Young (2006) find that the likelihood of manager making revenue-increasing with abnormal accruals to avoid reporting losses and earnings reductions is negatively related to the proportion of outsiders on the board. Niu's (2006) findings reveal that the extent of independence of the board has a negative

association with the level of abnormal accruals. Berthelot (2012) investigated the relationship between corporate governance mechanisms and firm value using a sample of 355 observations from 199 Canadian listed companies. Results suggest that independent directors on the board are negatively and significantly related to the firm's net book value or income. Uwuigbe, Sunday and Oyeniyi (2014) examined the association of corporate governance mechanism and earnings management in Nigeria for the period 2007 to 2011, using a sample of 40 listed firms. The study's findings reveal that board independence significantly reduces earnings management. Board independence is found to negatively and significantly reduce earnings management (Iraya, Mwangi, & Muchoki, 2015).

On the other hand, there are some counter-arguments which have proposed that completely independent boards may not be effective in monitoring management since management is more likely to cooperate with board members with whom they are better acquainted. For example, A study of corporate governance and earnings management finds that board independence is not reducing earnings management (Miko & Kamardin, 2015). Hoai-Anh, Nhat Linh, & Huy (2015) investigate the corporate governance mechanisms effect on earnings management using cross-sectional data of listed companies in Vietnam stock exchange for the period of 2014. The study finds that board independent has no significant relationship association with earnings management. Wen and Hsu (2015)

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examine the Chinese corporate governance mechanisms on discretionary accruals using the period of 2002-2012 for listed companies in Shanghai securities exchange market. The study reveals that independent directors in the board are not effective in regulating earnings management.

Fama and Jensen (1983) posit that the majority of independent directors are managers or decision-makers who care about their reputation. Also, outside independent directors possess technical expertise in both management and decision-making. Furthermore, independent directors are anticipated to be experts in order to be able to protect the interests of the shareholders and other stakeholders of financial statements by checking the financial reporting system. A majority of the researchers have found a negative association between the board of directors' independence and earnings management, which suggests that the more the non-executive directors are appointed as board members, the less earnings management activities would be.

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#### *2.8.1.2 CEO Duality (CEOD) and Earnings Management*

CEO duality means the director occupying the seats of the Managing Director and that of the chairman of the board of directors is the same person. The SEC Code (2011) states that "*Chief Executive Officer or Managing Director (MD) should be the head of the management team and answerable to the board. A board has a chairman who is a non-executive.*

*CEO duality is Chief Executive Officer serving as the chief executive and also the chair of the board that consists of the majority of the non-executive directors*". Jensen (1993) posits that the role of the Chair of the board is to monitor the CEO. Therefore, CEO-Chair cannot perform both functions without conflicts of interest. For the board to be effective and to perform its critical functions, it is essential that the position of the chair and CEO must be separated.

On the other hand, where corporate directors in the board other than the CEOs are absent from the majority of the board, directors become more dependent on their link with the CEOs for insider information. As a result, the critical information is often hidden from the directors or falsified (Mitchell, 2004), and the CEOs may influence the boards on many decisions.

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Several studies have investigated the relationship between earnings management and the duality of CEOs. CEO duality found in Dechow *et al.* (1996) is associated with enforcement action by the SEC for alleged violations of GAAP. Companies with CEO duality systematically increase the danger of CEOs making final decisions on financial reporting, which may, in turn, raise the costs of monitoring managers' actions of earnings management. Klein (2002) finds that board characteristics are associated with earnings management by firms, using US data from a sample of 692

listed firms for the period of 1992-1993; a CEO occupying a seat in the compensation committee increases the chances of a company's earnings management.

Rechner and Dalton (1991), in a study of US firms over the period 1978-1983, find that the financial returns of firms without CEO duality consistently outperformed those with it. Tsui *et al.* (2001) conducted a study using a sample of Hong Kong firms and find evidence that firms perceive higher inherent risk associated with CEO duality and hence, these firms are associated with higher audit fees. Gul and Wah (2002) report that firms with dual-role CEOs are more likely to manipulate discretionary accruals, especially when the managerial ownership exceeds 25%. Anderson *et al.* (2003) show that the relationship between earnings informativeness and CEO/Chair separated positions is positive. Rahman and Haniffa (2005) support that companies with CEO duality do not perform well and are inclined towards earnings management. Dey (2008) supports that CEO duality is negatively associated with the sincerity of earnings announcements. In addition, Chang and Sun (2009) show a negative association between CEO duality and earnings informativeness after SOX Act 2002 in cross-listed foreign firms.

Mohamad *et al.* (2012) examined the effect of corporate governance on earnings management behaviors of the Government Linked Companies

(GLCs) in Malaysia. Their findings show that separation of chairperson and CEOs in the companies has a negative impact on earnings management activities in the post-transformation period in Malaysia. Bliss (2011) examined whether CEO duality affects the association between board independence and the demand for higher quality audit using an Australian sample of 799 public listed firms. The result reports that CEO duality compromises the board of directors' independence. Uwuigbe *et al.* (2014) investigated the relationship between corporate governance and earnings management using 40 samples of listed Nigerian firms for the 2007-2011 period. It is revealed that CEO duality significantly increases earnings management. CEO duality is reported to be significantly increasing discretionary accruals (Uwuigbe Uwuigbe, Ranti, & Bernard, 2015; Wen & Hsu, 2015). Ogbonnaya, Ekwe and Ihendinihu (2016) investigate corporate governance effect on earnings management in Nigeria and find that CEO duality is significantly increasing earnings management. Foyeke, Olajide, Oluku and Kolade (2016) examine the corporate governance mechanisms for curbing earnings management in Nigeria using 354 respondents and find that CEO duality is positive and significantly increasing earnings management. The finding is consistent with the findings of Latif and Abdullah (2015), Iraya *et al.* (2015), Miko and Kamardin (2016), Wen and Hsu (2015), Hoai-Anh *et al.* (2015) that CEO duality existence significantly leads to earnings manipulation.

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A number of studies have argued that CEO duality brings benefits in the form of reduced information costs and enhanced command leadership (Anderson & Anthony, 1986; Brickley *et al.*, 1997). Baliga and Moyer (1996) find only weak evidence that CEO duality affects a firm's long-term performance. Dey, Engel, and Liu (2009) argue that firms select their leadership structure following an assessment of related costs and benefits of their respective governance structure and provide evidence that the market often reacts negatively to changes by firms moving away from having CEO duality, and that such a change is not always associated with improved performance. Murhadi (2009) explored the effect of good corporate governance in reducing earnings management practices in listed companies on the Indonesian Stock Exchange, using a sample of 384 firms for the period 2005-2007 with the Ordinary Least Square method. The result indicated that CEO duality has a significant effect in reducing earnings management. The majority of the literature agreed that CEO duality leads to earnings manipulation the argument is in line with the SEC Code of Corporate Governance 2011 that firms should separate the position of chairman of the board and the chief executive officer to avoid conflict of interest.

#### *2.8.1.3 Directors' Shareholdings (DH) and Earnings Management*

Directors' shareholdings are the shares owned by the directors of that particular firm. Stock ownership in organizations can be in a different form, but directors' stock ownership in an organization can lead to different

expectations. Bergstresser and Philippon (2006) find that discretionary accruals manipulation is higher in firms where the entitlement of CEOs is attached to the value of stock option holdings. Cheng and Warfield (2005) examined the association between managers' equity incentives, stock ownership and earnings management for the period 1993-2000 using 9,472 observations and find that managers' stock ownership is associated with earnings management on the impression that destructive earnings might rise the value of their stocks. They can take advantage of the higher price and sales their stocks. Park and Park (2004) find managers modify discretionary accruals to inflate present time earnings before they sell their own firm's stocks. Miko and Kamardin (2016) investigate the corporate governance mechanisms effect on earnings management using listed oil and gas firms in Nigeria for the period of 2004-2013. The study shows that directors' ownerships have positively and significantly increased earnings management.

However, directors' shareholdings in an organization can minimize conflict of interest between owners and shareholders; for example, audit committee directors with bigger share ownership are more likely to carry out their duties in accordance with shareholders' interests (Siregar & Utama, 2008).

Past studies have posited that the possibility of financial statement fraud decreases with the percentage of shares owned by outside directors and with

the average tenure of outside directors (Beasley, 1996). Directors' stock ownership influences board discussion on transparency by not allowing managers to engage in earnings management since there is no personal benefit (Fields *et al.*, 2001). Miko and Kamardin (2015) investigated the effect of corporate governance mechanisms under the pre- and post-code 2011 in Nigeria using the data of the consumer goods sector and find that directors' shareholding negatively and significantly reduces earnings management.

Prior research on directors' ownership has argued that earnings manipulation masks the truth about earnings and has potentially negative effects on stakeholders' interest (Hutchinson, Percy, & Erkurtoglu, 2008). Rose *et al.* (2013) examined the influence of directors' stock ownership, board discussion and transparency on financial reporting. The study finds that directors who own stocks are less likely to agree with management's aggressive reporting, and board discussions are more transparent, but there are no benefits of increasing transparency for directors who do not own stock. Similarly, Bhagat and Bolton (2013) find that firms with the largest number of directors in the audit committee with stocks ownership have higher integrity than firms with the smaller number of directors with stock ownership.

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Shares ownership in companies can be in a different form, but directors' shares ownership in an organization can lead to different expectations being it good (i.e reducing the opportunistic action of managers) to the company or bad (i.e increasing opportunistic action of managers). The present study expects directors with stock ownership to influence earnings upward.

### 2.8.2 Audit committee

Audit committee is a committee with members selected from shareholders to verify the board of directors' reports (Tricker, 2012). This system has existed since the 19th century but the current perception of the audit committee is as a standing committee of the board which consists of independent outside directors to bridge the gap between the external auditor and the main board (Tricker, 2012). This originated from the UK, i.e., an audit committee is a standing committee of the board which derives its authority from the formal board policy that formed it and it is accountable to the board (Tricker, 2012).

The independent assessment of audit committee of the public account and its review of the adequacy and compliance with internal accounting controls, contribute significantly to the minimization of irregularities. Given this critical role, the audit committee is considered to be strengthening the reliability of financial reports. After the passage of the financial scandals of big firms (such as Enron, WorldCom and Xerox), shareholders have

required firms to provide accurate and reliable financial information (Fodio *et al.*, 2013). Similarly, the SOX Act 2002 has approved new rules on the tasks of the audit committee. For example, the SOX Act 2002 imposes on a fully independent audit committee to be in charge of monitoring the financial reporting that audit committees previously did not do (Klein, 2002a).

According to the SEC Code (2011), every public company is mandated under section 359(3) and (4) of the CAMA'90 to form an audit committee. It is the duty of the board of directors to ensure that an audit committee is set up and it discharges its responsibility effectively. In addition to the statutory functions, the audit committee has the following additional responsibilities, among others:

(a) to oversee financial reporting compliance, general integrity and process.
(b) Review internal control's quality and weaknesses periodically.
(c) Discuss annual audited financial statement with external auditors.
(d) Report to the board.

The audit committee mechanisms chosen in this study are the financial experts in the audit committee, audit committee independence and audit committee size. These variables are selected based on previous studies'

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findings that these variables can significantly reduce earnings management and also due to the availability of data.

#### *2.8.2.1 Financial Expertise in Audit Committee (FEAC) and Earnings Management*

Monitoring the financial reporting process frequently involves deep knowledge of technical rules and accounting standards. Directors with sophisticated financial knowledge are more likely to be successful in restraining earnings management. As audit committee issues are technical and complex, members require technical and specialized knowledge in auditing and financial reporting process to independently examine the significance of the issues presented to them (Bull & Sharp, 1989; Mcdaniel *et al.*, 2002).

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The SEC Code (2011) states "*at least one member of the audit committee should have financial knowledge in accounting or financial management*". The SOX Act 2002 requires that firms disclose whether the audit committee includes a financial expert, and if not, why not. Mitchell (2003) posits that financial expertise in the audit committee has the better capacity to efficiently handle issues between management and auditors in the financial reporting process. Empirically, McDaniel *et al.* (2002) examined the different impacts of financial expertise and financial literates on financial reporting credibility using a pre-SOX Act 2002 sample. The results indicate

that putting financial experts in the audit committee can transform the corporate governance mechanisms and affect the committee's general assessment of the financial report. Xie *et al.* (2003) used pre-SOX Act 2002 samples of firms and investigated whether audit committee directors with financial background help to monitor earnings management. Their result suggests that presence of audit committee members with a corporate financial background is negatively related to discretionary current accruals. Bryan *et al.* (2004) also find that financially literate audit committee directors increase earnings informativeness. Bedard *et al.* (2004); and Carcello *et al.* (2006) show that the presence of at least one financial expert increases the possibility of lowering destructive earnings management.

Anderson, Mansi and Reeb (2004) find some evidence indicating that creditors consider financial experts relevant. Defond, Hann and Hu (2005), in their study related to the markets, find favoritism only for financial experts with accounting knowledge or expertise on the audit committee. Akhigbe and Martin (2006) reveal a positive assessment effect of the audit committee directors with financial expertise in the pre-SOX Act 2002 in the financial services industry. Dhaliwal *et al.* (2007) studied three types of financial experts (finance, accounting and supervisory) in audit committee and disclose positive association between quality of accruals and accounting experts. However, the study does not find a significant association between accruals quality and non-accounting experts.

A study conducted using a sample of 350 firms in the post-SOX Act 2002 period by Carcello *et al.* (2006) posits that both accounting experts and other non-accounting experts (such as venture capitalists and bankers) decrease earnings management when firms have a weaker corporate governance mechanism. Using cross-listed foreign firms, Chang and Sun (2009) find that the market responds positively to financial experts on the audit committee after the SOX Act 2002. Marra *et al.* (2011) find that financial expertise on the audit committee has a negative relationship with earnings management. Musa *et al.* (2014) studied the effect of audit committee characteristics on the financial reporting quality of deposit banks in Nigeria. The study employed multivariate regression analysis using the Nigerian banks as the sample; the study finds that audit committee's financial expertise has a positive effect on financial reporting quality.

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However, Yang and Krishnan (2005) failed to show a significant association between the existence of financial expertise and quarterly discretionary accruals. Meanwhile, Lin *et al.* (2006) find no evidence concerning the relationship between financial expertise and meetings of the audit committee members and restatements. Susanto and Pradipta (2016) examine the corporate governance mechanisms effects on the real earnings management using listed manufacturing firms in Indonesia for the period of 2011-2014. The finding shows that financial expertise in audit committee shows no significant relationship with real earnings

management. A high degree of financial sophistication is expected for audit committee directors to perform their tasks. Financial experts with a high degree of financial knowledge are expected to improve an audit committee's effectiveness in monitoring discretionary accruals.

#### *2.8.2.2 Audit Committee Independence (ACIN) and Earnings Management*

After the events of the financial scandals of giant corporations (e.g. Enron, WorldCom and Xerox), shareholders want firms to provide truthful and reliable financial information (Fodio *et al.*, 2013). The SOX Act 2002 then enforced new laws on the duties of the audit committee, including mandating firms to have a fully independent audit committee to be responsible for monitoring the financial reporting that was previously not done (Klein, 2002a). For the audit committee to be fully independent and effective, the majority of the directors must be non-executive (SEC Code, 2011).

Post-SOX Act 2002 studies have found that an effective audit is positively related to the high quality financial report (Goh, 2009). The presence of specialized standing audit committees indicates higher monitoring and attentiveness on the part of board members (Vafeas, 1999). Klein (2002a) finds that an independent audit committee serves as a better monitoring mechanism of the financial reporting process. Therefore, independent directors are more efficient in reducing earnings manipulation. The SOX

Act 2002 reforms demand that the audit committee comprises independent directors because inside directors have few incentives to resist managerial discretion. If an independent audit committee under SOX Act 2002 is more effective in deterring earnings management, the general earnings management in the post-SOX Act 2002 years is expected to reduce and the negative association between earnings manipulation and audit committee independence is expected to be powerful after SOX Act 2002.

Empirically, Xie *et al.* (2003) studied the role of the audit committee in preventing earnings management using discretionary current accruals as a proxy for earnings management for a sample of 282 firms for the years of 1992, 1994 and 1996. Using OLS regression, the study finds that percentage of independent outside directors on the audit committee is negatively related to discretionary current accruals. The justification that an independent audit committee is better in monitoring management actions than non-independent audit committee is supported by the following studies: Carcello and Neal (2000) document a positive association between audit committee independence and the quality of financial reports; Abbott, Parker, Peters and Raghunandan (2003); and Klein (2002a) find that audit committee independence has a negative relationship with misstatement and earnings management; and Bryan *et al.* (2004) posit that an efficient audit committee enhances the credibility of reported earnings. In examining the joint effects of audit committee effectiveness and auditors independence on earnings

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management, Jenkins (2002) finds independent audit committee mitigates income-increasing earnings management.

Akhigbe and Martin (2006) find a favorable influence of SOX Act 2002 on the market valuation of financial service firms with a majority of independent audit committee members. Osma and Noguer (2007) observe that an audit committee with greater independence is associated with lower earnings management levels. Using cross-sectional firms, Chang and Sun (2009) report that markets react positively to the disclosure of a fully independent audit committee after SOX Act 2002. Carcello *et al.* (2006) reveal that independent audit committee members with financial expertise are most effective in mitigating earnings management. Sun (2013) examined the interaction effect of audit committee independence and auditor industry specialization on earnings management using 18,513 firm-year observations from 1999-2010. The study finds a negative and significant interaction of audit committee independence and audit industry specialization. Latif and Abdullah (2015) examine the corporate governance effectiveness in curbing earnings management using 120 non-financial firms listed in Karachi-Pakistan stock market for the period of 2003-2013. The result indicates that audit committee independence has significantly reduced earnings management.

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Fodio *et al.* (2013), in their study, tried to ascertain the extent to which certain governance dynamics in the code of good corporate governance for the Nigerian insurance industry, is able to mitigate earnings management. The results reveal that audit committee independence has a positive relationship with discretionary accruals, which implies that these variables might not reduce the extent of earnings manipulation by managers in the Nigerian insurance industry. Musa, Oloruntoba and Oba (2014) investigated the effect of audit committee characteristics on the financial reporting quality of deposit banks in Nigeria. The study finds that audit committee independence has a positive relationship with financial reporting quality. Audit committee independence positively and significantly increases earnings management (Miko & Kamardin, 2015). Miko and Kamardin (2016) examine the effect of corporate governance mechanisms on earnings management using listed oil and gas firms in Nigeria for the period of 2004-2013. The study shows that audit committee independence have positive and significantly increase earnings management. Independent audit committee is expected to monitor the financial reporting process effectively because the majority of the members are non-executive directors.

#### *2.8.2.3 Audit Committee Size (ACS) and Earnings Management*

The SEC Code (2011) provides no fixed number of audit committee members; the audit committee size should be based on the company size. Audit committee size refers to the number of directors on the audit committee. Audit committee is responsible for ensuring the quality of

reported earnings. Studies report that a big audit committee tends to: improve the audit committee's status and power in an organization (Kalbers & Fogarty, 1993); receive more resources (Pincus, Rusbarsky, & Wong, 1989); and lower the cost of debt financing (Anderson *et al.*, 2004). A larger audit committee is more likely to improve the quality of internal controls than a small one because larger resources allocated to the committee will enhance its ability to perform better and make it more effective in fulfilling its monitoring role, thus leading to enhanced overall performance.

Ghosh, Marra and Moon (2010) conducted a study on corporate boards, audit committees and earnings management under the pre- and post-SOX Act 2002, and find that audit committee size influences discretionary accruals under the pre-period but not the post-period. Fodio *et al.* (2013) studied corporate governance mechanism and reported earnings quality in the Nigerian insurance industry and find that audit committee size is significantly and negatively associated with discretionary accruals. Vafeas (2005) reports that audit committee's performance is determined by committee size. Many members of the committee will enhance performance because there are more people to draw upon. Miko and Kamardin (2016) investigate the impact of corporate governance mechanism on earnings management using listed oil and gas firms in Nigeria for the period of 2004-2013. The study shows that audit committee size have negatively and significantly reduce earnings management.

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Xie *et al.* (2003) disclose an insignificant association between audit committee size and discretionary accruals. Musa *et al.* (2014) investigate the impact of audit committee mechanisms on the financial reporting quality of deposit banks in Nigeria using multivariate regression analysis and find that audit committee size has no significant impact on the quality of financial reporting. Audit committee size is associated with discretionary accruals but not at a significant level (Miko & Kamardin, 2015). Susanto and Pradipta (2016) examine the influence of corporate governance mechanisms on the real earnings management using listed manufacturing firms in Indonesia for the period of 2011-2014. The finding shows that audit committee size indicates no significant association with the real earnings management.

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However, a larger audit committee may likely cause issues in the financial reporting process. An audit committee with more members may decrease performance because of process losses and diffusion of responsibility.

### 2.8.3 Firm Characteristics

Firm characteristics are defined as "*pre-doctor guideline of quality disclosure*" (Rahman & Widyasari, 2008). Firm characteristics are guidelines to managers to report true earnings because whenever managers are planning to manipulate earnings upward, they must be cautious of these characteristics, as they have multiple effects on the managers' actions toward the shareholders' wealth. For example, any opportunistic increase in

earnings will lead to a decrease in shareholders' capital. Rahman and Widyasari (2008) divide firm characteristics into three groups:

1. Firm structure variables, e.g., firm size, leverage, ownership type, company tax;
2. Firm performance variables, e.g., profitability, type of firm, firm origin; and
3. Market structure variables, e.g., type of industry, corporate social responsibility.

The present study considers corporate tax and corporate profit to test their influence on reducing earnings management due to their immediate negative/positive (i.e., profit increase value and tax decrease value) impact on shareholders' wealth. Corporate tax and profit can control managers' opportunistic action in manipulating earnings upward because any increase in firm's earnings will lead to increase in profit and more dividends and tax must be paid. Paying dividends and tax out of unrealistic earnings is directly a payment from the shareholders' capital, which will become agency cost.

#### *2.8.3.1 Corporate Tax (CT) and Earnings Management*

Tax is defined as government income expressed as a percentage of GDP. It differs from one country to another (Vegh & Vuletin, 2012). Tax is a compulsory levy imposed on a company's profit. The higher the profit, the higher the tax paid, based on the assumption of the theory of demand and supply. Paying profit tax levy from unrealistic earnings is a loss of the company's wealth.

Researchers have found that managers face problems when trying to boost financial reporting income, due to the tax increase. Managers may minimize reported book income (Shackelford & Shevlin, 2001). Similarly, managers trying to minimize income reported to tax authorities may report lower income to shareholders, thereby incurring financial reporting costs (Frank *et al.*, 2009). Some firms may report higher book income to shareholders and lower taxable income to tax authorities (Boynton, DeFilippes, & Legel, 2005).

However, where a firm has the ability to boost financial income and report tax which is not obvious, that firm would be willing to report both book income and taxable income. But where there is no conformity between reported financial income and reported tax, research has argued that firms are subject to greater scrutiny from regulators (Badertscher, Phillips, Pincus, & Rego, 2009; Cloyd, 1995); and external auditors (Hanlon, Krishnan, & Mills, 2006). For example, Boynton *et al.* (2005) indicate that total reported financial income and reporting tax differences taken from corporate US tax returns generated from $43billion in 1993 to $313 billion in 1999; after reducing to $49 billion in 2001, the reported financial income and reporting tax gap dropped to $436 billion in 2003. Thus, evidence suggests that companies were increasingly engaging in aggressive reporting practices during this period. However, firms may avoid increasing both reported

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financial income and reported tax to avoid greater regulatory scrutiny (Frank *et al.,* 2009).

Previous studies have examined the deferred tax assets valuation allowance and earnings management and found mixed evidence of earnings management activities using valuation allowance (Bauman, Bauman, & Halsey, 2001; Chao, Kelsey, Horng, & Chiu, 2004; Visvanathan, 1998). Noor, Mastuki and Aziz (2007) investigated the usefulness of deferred tax expense to manage earnings to meet firms' earnings targets, i.e., to avoid earnings decline and to avoid a loss using consumer and industrial products in Malaysia, for the period 2001-2003. The result shows that firms use deferred tax expense and discretionary accruals to avoid loss. The results do not support that firms use deferred tax expense and discretionary accruals to avoid an earnings decline. Another study investigated Australian gold-mining firms - whether they engage in downward earnings management or upward earnings management during the periods 1985-1988 and 1988-1990, respectively. The findings show consistently significant downward earnings management by Australian gold-mining firms during the period from June 1985 to May 1988 and upward earnings management during the period from 1988 to 1990 (Monem, 2003).

Dhaliwal, Gleason and Mills (2004) examined whether or not firms use income tax accruals as an earnings management tool when pre-tax earnings

fall short of market earnings expectations in the US. They reveal that when the difference between analyst forecasts and pre-managed earnings increase, fourth quarter effective tax rates decrease relative to third quarter effective tax rates. This finding is consistent with earnings management using total income tax expense (Linda, 2004). Morec (2012) examined Slovenian property insurers overestimating provisions for claims outstanding, and consequently, reducing net income in order to reduce tax liability. The findings suggest that Slovenian property insurers underestimate provisions for claims outstanding in order to reduce income tax burden. Frank *et al.* (2009) investigated the association between aggressive tax and financial reporting and find that insufficient costs exist to offset financial and tax reporting inducements, such that non-conformity between financial accounting standards and tax law allows firms to manage book income upward and taxable income downward in the same reporting period.

Herbohn, Tutticci and Khor (2010) examined how managers choose to use their discretion over the amount of unrecognized tax assets from carry forward losses that are accessible under the income statement method specified in the Australian Accounting Standard Board (AASB) 1020. Firm managers with pre-tax earnings below the median analyst earnings forecast increase expected pre-tax earnings figure into a higher than expected after-tax profit figure. Strategically using unrecognized deferred tax accruals from

carry-forward losses, the result shows no evidence of income-decreasing earnings management toward this target.

Tax is a compulsory levy imposed on a company's profit. The higher the profit, the higher the tax paid, based on the assumption of the theory of demand and supply. Paying profit tax levy from unrealistic earnings is a loss of the company's wealth. The study expects that paying tax revenue out of shareholders wealth will discourage managers from inflating earnings.

#### *2.8.3.2 Corporate Profit (CP) and Earnings Management*

Profit is the income before tax generated from the normal businesses of firms. Corporate profit can be considered as a roadblock to the managers for their unlawful attitude of income manipulation. Profit is considered as the key indicator of a firm's ability to pay dividends (Anil & Kapoor, 2008). Carroll (1979), Jones (1995) and Phillips *et al.* (2003) suggest that managers should do the right thing at the right time; for instance, where a company gets large profit, more dividend must be paid.

It is argued that profit is the determining factor for dividends; when managers increase their earnings upward, shareholders will definitely ask for better dividends. This reason may change managers' action to report real earnings. For instance, Lintne (1956); and Baker, Farrelly, and Edelman (1985) show that the previous year's dividend and current year's earnings play a vital role in determining dividend payment style of a firm. Baker *et*

*al.* (1985) indicate that the projected amount of future earnings is the contributing factor for dividend payment.

Various studies have indicated that profit is the key determinant of dividend paid. For example, Pruitt and Gitman (1991) examined the interaction between investment, financing and dividend decisions using 114 responses from financial managers of 1,000 largest US firms and report that the present and previous years' profits are significant factors in influencing dividend payments. Baker and Powell (2000) conducted a study using a survey of New York Stock Exchange listed firms and find that the basis of dividends is peculiar to industry type and expected level of future earnings is a major determinant.

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Previous studies, including Amidu and Abor (2006), have posited that corporate profitability and dividend payout ratios have a positive relationship. Gill, Biger, Tibrewala, and Palmer (2010) investigated the determinants of dividend payout ratios using US service and manufacturing firms. The findings of the study indicate that for the entire sample of the study, dividend payout ratio is positively related to profit margin. Another study finds that firms with larger profit are more likely to pay a dividend, while firms that are facing uncertainty about future profit would adopt lower payout (Lintne, 1956; Prices & Puckett, 1964). John and Muthusamy (2010) put forward that ROA is positively related to dividend payout, consistent

with previous studies. It is clear that profit is the determinant of dividend - when profits increase upward, investors may require higher dividend payout, which will affect the company's wealth.

Since, there is no study that established the relationship between corporate profit and earnings management the present study expects those companies that make the higher profit will not manage earnings upward because they will pay the dividend out of the shareholders' fund.

### 2.8.4 Institutional Investors as Moderating Variable

Institutional investors/ownership are seen as big investors such as insurance firms, banks, pension funds, financial institutions, investment firms, and other corporate businesses related with the mentioned categories of institutions (Koh, 2003). Institutional investors are expected to perform a vital role in minimizing opportunistic behaviors which lead to the decrease in agency conflicts. Some of the functions are as follows:

1- Institutional shareholders play a vital role to minimize any asymmetric information that may harm their investments and put the control to suit their own interest (Jarrell & Poulsen, 1987).

2- Institutional investors have incentives to monitor the attitude of managers, according to Grossman & Stiglitz (1980) that will solve the Free-Rider problem.

3- Institutional shareholders are so big to the extent that they have less ability to move quickly than individual investors, without affecting the stock prices (John Pound, 1988).

4- Institutional shareholders involved in firms decisions than other non-institutional investors (Brickley, Lease, & Smith, 1988).

5- Institutional shareholders have a strong interest in the performance of the firm and other sub investments of that particular firm (Pound, 1992; Review *et al.,* 1991; Smith, 1996).

6- Institutional investors assist the market for corporate control to sell their shares willingly when an appropriate bid made (Shleifer & Vishny, 1986).

The participation of institutional investors may lead firms to change their behavior. Institutional investors have control over investee corporations and shake the investees' policies to perform better because of the power of their substantial shareholdings. Institutional investors can influence decisions of the audit committee to monitor financial reporting process effectively which lead to the decrease in agency issues.

Previous literature reveals that institutional investors seen as sophisticated investors who serve a monitoring role in reducing pressure for myopic behavior. For instance, Bushee (1998) investigates whether institutional investors create or reduce incentives for corporate managers to decrease expenditure in research and development (R&D) to meet short-term

earnings goals. The result indicates that managers were less likely to cut down research and development to reverse earning decrease when institutional ownership is high. Ferreira and Matos (2008) investigate the institutional investors' role around the world using a comprehensive data set of equity holdings from 27 countries. The results show that firms with higher ownership through foreign and independent institutions have bigger company value, greater operating performance and lower capital expenditures. Cheng and Reitenga (2009) find that active institutional block-holders exercise their monitoring power only when there is a pressure to boost earnings.

Institutional investors are more likely to limit income-increasing accruals than income-decreasing accruals. Koh (2003) find that the relationship between instructional ownership and aggressive earning management was positive at the lower level of institutional ownership and negative at the higher level of institutional ownership. This is consistent with the view that monitoring by long-term institutional investors limits managerial accruals discretion.

Charitou, Lambertides and Trigeorgis (2007) examine the earnings behavior of managers during the distressed period. The results showed that the executive of troubled companies with lower (higher) institutional ownership have greater (lesser) tendency to manage earnings. Osma and Noguer (2007)

tested whether corporate governance mechanisms are effective in constraining earnings management. The study finds that the key constraint of earnings management is institutional directors, unlike the UK and USA where independent directors play a significant role. Mousavi Rad, Salehi and Vali Pour (2016) examine the effect of ownership structure on earnings management using listed companies data of Tehran stock exchange for the period of 2009-2013. The finding discloses that institutional investors have significantly reduced earnings management. Susanto and Pradipta (2016) investigate the effect of corporate governance mechanisms on the real earnings management using listed manufacturing firms in Indonesia for the period of 2011-2014. The finding shows that institutional investors significantly reducing real earnings management. Lakhal (2015) examines corporate ownership structure and earnings management of listed French firms using cross-sectional data of 170 firms in 2008 and find that institutional investors have significantly reduced earnings management.

However, some studies find that institutional investors force managers to manipulate earnings. For example, Siregar and Utama (2008) conducted a study on the ownership structure and corporate governance practice in Indonesia using 144 samples of listed firm within the period 1996-2002. The study finds that institutional ownership does not significantly encourage managers to improve efficiency earnings. Wen and Hsu (2015) examine the Chinese corporate governance mechanisms on discretionary accruals using

the period of 2002-2012 for listed companies in Shanghai securities exchange market. The study reveals that institutional investors with high ownership encourage managers to manipulate discretionary accruals for short time profit. Latif and Abdullah (2015) examine the corporate governance effectiveness in curbing earnings management using 120 non-financial firms listed in Karachi-Pakistan stock market for the period of 2003-2013. The result indicates that institutional ownership has significantly increased earnings management.

SEC Code (2011) required institutional investors to participate in the public listed firms in order to contribute in controlling irregularities performs by managers. Institutional investors have introduced in this study to moderate the inconsistent relationship between corporate governance mechanisms and earnings management. Moderator simply means a qualitative or quantitative variable that affect the relationship (in positive or negative) between independent variable (predictor) and dependent variable (criterion variable) (Zahra & Pearce, 1989).

Furthermore, the reason for introducing moderator in the study is the inconsistency of the result between corporate governance and earnings management. Moderator variable can introduce where there is inconsistency or weak relationship among the dependent variable and the independent variables (Sherman & Fazio, 1983; Snyder, 1983; Zahra & Pearce, 1989).

From the previous researchers justify that institutional shareholders play a significant role in monitoring and mitigating management opportunistic behavior such as earnings management. This study uses institutional shareholding as the moderator on the relationship between corporate governance and earnings management.

## 2.9 Summary

This chapter reviews earnings management as opportunistic action by managers on reported earnings to mislead stakeholders. It highlights three forms of earnings management: using certain revenues/expenses; changing the accounting procedures, and using accruals management. It also reviews the opportunistic behavior of managers to aggressively report earnings and efficient earnings management style, which enhances earnings of their firms. The chapter also reviews methods of estimating discretionary accruals using various models. Similarly, total accruals and current accruals models are reviewed. Furthermore, corporate governance development in Nigeria is discussed right from the colonial period when the first company ordinance of 1922 was legislated, until recent times when various institutions have been established. The chapter also reviews some previous studies conducted on corporate governance and earnings management in the general context.

The chapter also highlights theories that explain the relationship between the shareholders and managers' conflicts of interest, in addition to how such

conflicts are resolved based on scholarly contributions. The agency theory explains the relationship between principal and agent. The ethical theory explains managers' honesty. Lastly, the political theory highlights a firm's relationship with society and its associated obligations to that society. The last section of the chapter reviews literature on earnings management in relation to a variety of elements including moderator of the study.

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# CHAPTER THREE

## CONCEPTUAL FRAMEWORK AND RESEARCH METHODOLOGY

### 3.1 Introduction

This chapter explains the conceptual framework and research methodology of the study. A conceptual framework diagram is a diagram that displayed the nature and variables of the study. This conceptual framework has independent variables, control variables with one dependent variable and a moderator. The second section looks at the theories and the trend of arguments in past studies that facilitate hypotheses formulation.

Lastly, this present chapter explains in detail how the research would be carried out and approaches used, including earnings management model used for calculating discretionary accruals. Population of the study, process of selecting sample size from population, process of sourcing data and measurements of the variables which include earnings management, board characteristics, audit committee characteristics, firm characteristics and control variables are also discussed.

### 3.2 Conceptual Framework

Figure 3.1 shows the conceptual framework of the study demonstrating the relationship between dependent, independent, control and moderating variables.

The Figure 3.1 below is the conceptual framework of the study.

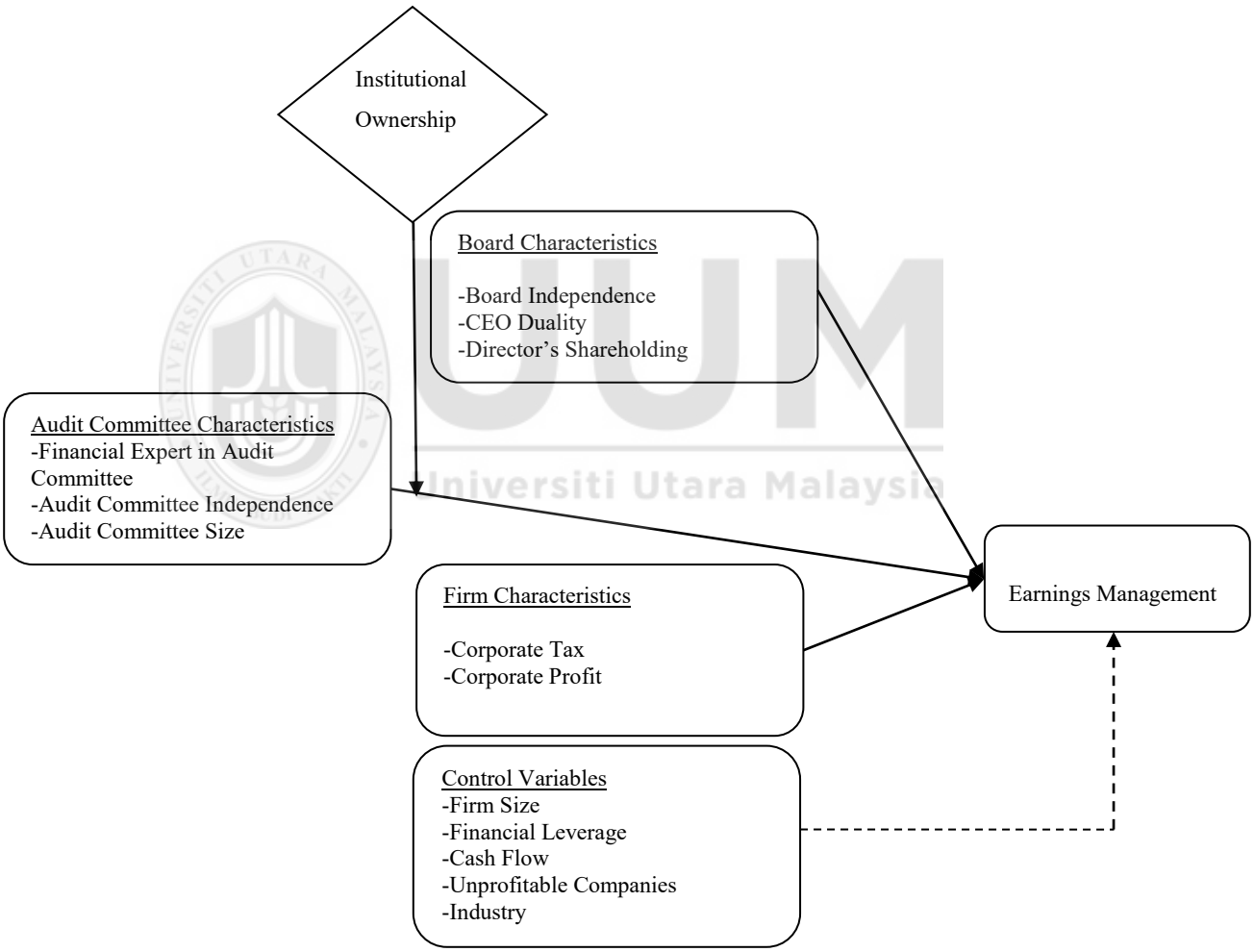


*Figure 3.1: Conceptual Framework*

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Figure 3.1 above, the conceptual framework shows earnings management (proxy with discretionary accruals) as the dependent variable, and board independence, CEO duality, directors' shareholdings, financial expertise in audit committee, audit committee independence, audit committee size, corporate tax, and corporate profit as independent variables. Firm size, financial leverage, cash flow, unprofitable companies and industry serve as control variables. Institutional ownership moderates the relationship between the audit committee and earnings management.

### 3.3 Hypotheses Development

To formulate hypotheses for this study, the agency theory, political cost theory, ethical theory and the myopic institutional theory are considered as the theories that link the hypotheses of the study. Furthermore, studies on the independent variables and the dependent variable, all of which lead to the hypotheses development, are reviewed.

#### 3.3.1 Board Independence (BOIN) and Earnings Management

The agency theory puts forward that board of directors, as one of the mechanisms of corporate governance, is expected to control the behavior of managers (Jensen & Meckling, 1976). Board of directors' responsibility is to provide independent oversight of management performance and to hold management responsible to investors for their actions (DeFond & Jiambalvo, 1994; Dichev & Skinner, 2002). Existing studies, like Klein (2002b), testify that companies with independent boards are less likely to

report unrealistic accruals. Beasley (1996) finds that the presence of outside directors reduces the possibility of fraud in the presentation of financial statements. Equally, Xie *et al.* (2003) find similar results with respect to the relationship between earnings management and the independence of boards, as well as the financial sophistication of board members. Peasnell *et al.* (2005); and Marra *et al.* (2011) show that board independence is an essential tool to reduce the magnitude of earnings management. Osma and Noguer (2007); and Miko and Kamardin (2015) find a negative relationship between board independence and earnings management. Ali and Zhang (2015) find a negative and significant relationship between board independence and earnings management. Latif and Abdullah (2015) indicate that audit committee independence has significantly reduced earnings management.

There are some conflicting arguments proposing that independent boards may not be effective in monitoring the affairs of management since management is more likely to cooperate with board members with whom they are more familiar. For example, Abdullah and Nasir (2004); Rahman and Ali (2006); and Saleh and Iskandar (2005) put forward that board independence has no impact on earnings management. Hoai-Anh, Nhat Linh, & Huy (2015) find that board independent has no significant relationship association with earnings management. Wen and Hsu (2015) reveal that independent directors in the board are not effective in regulating earnings management. Furthermore, Anderson *et al.* (2003) find that

earnings informativeness is positively related to board independence. Petra (2007) finds a positive association between earnings informativeness and board independence, but no association between earnings informativness and independent audit committee. A vast majority of the research discovers a negative association between board independence and earnings management, which suggests that as more directors who are independent are appointed as board members, earnings management activities will reduce. Therefore, based on the agency theory, the study hypothesized that:

H1: There is a negative relationship between board independence and discretionary accruals.

### 3.3.2 CEO Duality (CEOD) and Earnings Management

The agency theory concentrates on the conflicting interests between principals and agents. Governance mechanisms are required to monitor management decisions (Roberts, McNulty, & Stiles, 2005). Similarly, in firms where CEO duality exists, manipulation of discretionary accruals will likely take place (Gul & Wah, 2002).

Several studies have investigated the relationship between earnings management and CEO duality. Dechow *et al.* (1996) posit that CEO duality is associated with enforcement action by the SEC for alleged violations of GAAP. Firms with dual-CEOs increase the risk of CEOs making overall decisions on financial reporting, which may, in turn, increase the costs of monitoring the managerial behavior of earnings management. Klein (2002b)

shows that a CEO sitting on the compensation committee increases the possibility of a firm's earnings management. Tsui *et al.* (2001) find evidence that firms perceive higher inherent risks associated with CEO duality firms and hence these firms are associated with higher audit fees. Gul and Wah (2002) report that firms with CEO dual-roles are more likely to manipulate discretionary accruals. Anderson *et al.* (2003) find that earnings informativeness is positively related to firms with separate CEO and chair positions. Mohamad *et al.* (2012) find the separation of chairperson and CEO in the company has a negative impact on earnings management activities in the post-transformation period in Malaysia. Iraya *et al.* (2015); and Wen and Hsu (2015) find that CEO duality significantly increases earnings management. Ogbonnaya, Ekwe and Ihendinihu (2016) disclose that CEO duality is significantly increasing earnings management. Foyeke, Olajide, Oluku and Kolade (2016) find that CEO duality is positive and significantly increasing earnings management which is in line with the findings of Latif and Abdullah (2015), Iraya *et al.* (2015), Miko and Kamardin (2016), Hoai-Anh *et al.* (2015) that CEO duality existence significantly leads to earnings manipulation.

A number of studies have argued that CEO duality brings benefits by reducing information costs and enhances command leadership (Anderson & Anthony, 1986; Brickley *et al.*, 1997). Dey (2008) finds a negative relationship between dual-role CEOs and earnings informativeness after

SOX Act 2002. Dey *et al.* (2009) posit that companies select their management structure following an assessment of related costs and benefits of their respective leadership structure and provide evidence that the market often reacts negatively to changes by firms moving away from having CEO duality; as such, a change is not always associated with improved performance. However, a majority of the studies finds a negative relationship between separate chairman/CEO and earnings management, which indicates that the more the position of CEO and chairperson is separate, the more earnings management activities will reduce. Similarly, another group argues that CEO duality increase earnings manipulation. Therefore, based on the agency theory, it is hypothesized that:

H2: There is a positive relationship between CEO duality and discretionary accruals.

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### 3.3.3 Directors' Shareholdings (DH) and Earnings Management

Directors' ownership of stocks in the organization may cause a negative or positive effect on the organization. For example, Bergstresser and Philippon (2006) find that discretionary accruals manipulation is higher in firms where entitlement of CEOs is attached to the value of stock option holdings. Cheng and Warfield (2005); Dechow, Ge and Schrand (2010); and Larcker, Richardson and Tuna (2004) point out that managers' stock ownership is associated with earnings management on the notion that manipulated earnings might increase the value of their stocks. They can take advantage of the higher price and sales of their stocks. Park and Park (2004) find that

managers modify discretionary accruals to inflate present time earnings before they sell their own firm's stocks. Miko and Kamardin (2016) show that directors' ownerships have positive and significantly increase earnings management.

However, the agency theory highlights that executive directors' stock ownership might reduce the level of conflict of interests between the management and shareholders (Jensen & Meckling, 1976). On the process of aligning dispute, the owners of the firm should make sure managers undertake risk-bearing strategies that will enhance stock value of the firm (Hutchinson, Percy, & Erkurtoglu, 2008). Where managers' benefits are attached to company performance, managers might use earnings management to increase their performance. The issues of manipulating earnings that lead to agency cost can be minimized where directors own substantial stocks (Hutchinson *et al.,* 2008). When the directors' ownership increases, it will reduce the agency problem (Crutchley & Hansen, 1989; Jensen & Meckling, 1976). Directors will not act as opportunists since they will also bear the costs of their decision. Holding shares of the company is an encouragement for managers to raise company performance. Previous studies have indicated that directors' stock ownership influences board discussion on transparency by not allowing managers to engage in earnings management since there is no personal benefit (Fields *et al.,* 2001).

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Researches on directors' ownership argue that earnings manipulation masks the truth of earnings and has potentially negative effects on stakeholders' interest (Hutchinson *et al.,* 2008). Bhagat and Bolton (2008) document a positive relationship between the dollar amount of stocks owned by the median directors and a firm's contemporaneous and subsequent operating performance; they suggest that the dollar amount of the ownership stake may be more relevant in explaining firm performance than the percentage of stock ownership. Bhagat and Tookes' (2012) study finds that mandatory stock ownership of outside directors is not associated with future performance, but outside directors' voluntary stock holdings are positively and significantly associated with future performance.

Rose *et al.* (2013) examined the influence of directors' stock ownership, board discussion and transparency on financial reporting. Their study finds that directors who own stocks are less likely to agree with management's aggressive reporting. Bolton (2014) finds that firms with the highest levels of directors on the audit committee with stock ownership have higher operating performance than firms with a smaller level of stock ownership. Miko and Kamardin (2015) find that directors' stock ownership significantly reduces earnings management. Stock ownership of directors can lead to a decrease or an increase in earnings manipulation. Based on agency theory, the study hypothesized that:

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H3: There is a positive relationship between directors' shareholdings and discretionary accruals.

### 3.3.4 Financial Expertise in the Audit Committee (FEAC) and Earnings Management

The audit committee is responsible for monitoring the financial reporting process. Financial expertise in the audit committee can improve the performance and effectiveness of the committee, and not allow accounting manipulation to pass through the audit committee without detecting it. Carcello *et al.* (2006) find that accounting expertise in the audit committee reduces earnings management.

Empirically, McDaniel *et al.'s* (2002) findings suggest that placing financial experts in audit committees is likely to change the corporate governance structures and affect the committees' overall assessment of the financial reports. Xie *et al.*(2003) suggest that the presence of audit committee directors with corporate financial experience is negatively related to discretionary current accruals. Bryan *et al.*(2004) disclose that financially literate audit committee members increase earnings informativeness. Bedard *et al.*(2004); and Carcello *et al.*(2006) posit that the presence of at least one director with financial expertise is associated with a lower possibility of destructive earnings management. Similarly, Anderson *et al.* (2004) find little evidence indicating that creditors consider the relevance of financial experts.

However, Yang and Krishnan (2005) failed to find a reasonable association between the existence of financial expertise and quarterly discretionary accruals. Susanto and Pradipta (2016) show that financial expertise in audit committee shows no significant relationship with real earnings management. Defond *et al.* (2005) indicate positive response only to financial experts with an accounting background knowledge or proficiency on the audit committee. Akhigbe and Martin (2006) report a valuation effect of the audit committee directors with accounting expertise in the pre-SOX Act 2002 of the financial services industry. Dhaliwal *et al.'s* (2007) results testify a positive association between accruals quality and accounting experts. The study does not find a significant relationship between accruals quality and non-accounting experts. Carcello *et al.* (2006) show that accounting experts and other non-accounting experts, e.g., bankers and venture capitalists, decrease earnings management. Chang and Sun (2009) report that market reacts positively to financial experts on the audit committee after the SOX Act 2002. Marra *et al.* (2011) find that financial expertise in the audit committee has a negative relationship with earnings management.

Furthermore, it requires a high degree of financial sophistication for audit committees to perform their tasks professionally and accurately. Financial experts are expected to improve an audit committee's effectiveness in monitoring discretionary accruals. This study hypothesizes that:

H3: There is a negative relationship between financial expertise in the audit committee and discretionary accruals.

### 3.3.5 Audit Committee Independence (ACIN) and Earnings Management

For mitigating agency problems, audit committee's independence adds value to the committee by reducing misstatements of reported earnings. Chang and Sun (2009) state that market reacts positively to the disclosure of fully independent audit committee. Carcello *et al.* (2006) find that independent audit committee with financial expertise are more effective in mitigating earnings management. Post-SOX Act 2002 studies have found that an effective audit committee is positively associated with high-quality financial reports (Goh, 2009). The presence of specialized standing audit committees indicates great ability of monitoring and diligence on the part of board members (Vafeas, 1999). Klein (2002a) posits that independent audit committees serve as a very good monitor of the financial reporting process. Therefore, they are more effective in limiting earnings manipulation.

The recent Corporate Governance Code 2011 requires that the audit committee consists of independent directors because inside directors have fewer incentives to oppose managerial reporting discretion. If the independent audit committee under SOX Act 2002 is more effective in deterring earnings management, the overall earnings management in the post-SOX Act 2002 years is expected to decline, and the negative

relationship between earnings management and audit committee independence is expected to be stronger after the SOX Act 2002.

Empirically, evidence shows the positive effect of independent audit committees. For example, Carcello and Neal (2000) document a positive relationship between greater audit committee independence and the quality of the financial report. Similarly, Abbott *et al.* (2003); and Klein (2002) find that audit committee independence has a negative relationship with misstatement and earnings management. Xie *et al.* (2003) report a negative association between earnings management and the independence of audit committees. Bryan *et al.* (2004) find that an effective audit committee improves the credibility of reported earnings. Jenkins (2002) finds that an independent audit committee mitigates income-increasing (earnings management). Chang and Sun (2009) find that markets react positively to the disclosure of a fully independent audit committee after SOX Act 2002.

In investigating the joint effects of audit committee effectiveness and auditor independence on earnings management, Akhigbe and Martin (2006) state that SOX Act 2002 shows favorable influence on market valuation in financial service firms with majority-independent audit committee and independent board. Similarly, Petra (2007) finds a positive association between earnings informativeness and board independence, but no association between earnings informativeness and independent audit

committee. Miko and Kamardin (2015) report a positive and significant association between audit committee independence and earnings management. If a fully independent audit committee, as anticipated by regulators and investors, is effective in monitoring managers' earnings management behavior, the relationship between discretionary accruals and independent audit committee is expected to be negative. This study, therefore, hypothesizes that:

H5: There is a negative relationship between independent audit committee and discretionary accruals.

### 3.3.6 Audit Committee Size (ACS) and Earnings Management

The agency theory puts forward that the audit committee, as one of the mechanisms of corporate governance, is expected to oversee the financial reporting process (Jensen & Meckling, 1976). If an audit committee has directors more than the reasonable number, that committee is likely to function less effectively.

Empirical studies, like Felo, Krishnamurthy and Solieri (2003), find evidence of a positive relationship between the size of an audit committee and financial reports' quality. Xie *et al.* (2003) reveal an insignificant relationship between audit committee size and discretionary accruals. Vafeas (2005) discloses that performance of audit committee is determined the committee size. Many members of the committee will enhance

performance because there are more people to draw upon. Ghosh *et al.* (2010), in their studies on corporate boards, audit committee and earnings management: pre- and post-SOX Act 2002 evidence, find that audit committee size influences discretionary accruals at the pre-period and not at the post-period. Susanto and Pradipta (2016) find that audit committee size indicates no significant association with the real earnings management. Fodio *et al.* (2013), in their study on corporate governance mechanism and reported earnings quality in the Nigerian insurance industry, find that audit committee size is significantly and negatively associated with discretionary accruals. Miko and Kamardin (2015) find committee size reduces earnings management.

From another angle, a larger audit committee may likely cause problems in the financial reporting process. When committees grow too large, performance declines because of too many directors in the committee, protocol and flow of discharging responsibility may be skipped (Felo *et al*. 2003). Based on the two different arguments therefore, the study hypothesized that:

H6: There is a negative relationship between audit committee size and discretionary accruals.

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### 3.3.7 Corporate Tax (CT) and Earnings Management

Evidence shows that firms that manage book-income upward without managing taxable-income upward or manage taxable-income downward without managing book income downward, engage in aggressive financial and tax reporting behaviors (Frank *et al.,* 2009). The agency theory states that a conflict of interests between owners and managers of businesses will always exist because managers may make decisions based on their interest at the expense of the shareholders (Jensen & Meckling, 1976). The political cost theory states that tax is imposed on firm's profit, i.e., the more profit reported, the more tax that will be paid (Han & Wang, 1998). Researchers have put forward that firms with large book-tax variations are subject to bigger scrutiny from overseers (Badertscher *et al.,* 2009; Cloyd, 1995); and external auditors (Hanlon *et al.,* 2006).

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Past studies have examined the deferred tax assets valuation allowance and earnings management and have found mixed evidence of earnings management activities using valuation allowance (Bauman *et al.,* 2001; Chao *et al.,* 2004; Visvanathan, 1998). Another study shows that firms use deferred tax expenses and discretionary accruals to avoid a loss and the results do not support that firms use deferred tax expenses and discretionary accruals to avoid an earnings decline (Noor *et al.,* 2007). Monem (2003) find that there was a significant downward of earnings management during the period of tax exemption in Australian (1985-1988), on the order hand,

there was a significant upward earnings management during the period of 1988-1990 when tax assessments continued. Dhaliwal *et al.*(2004) find that as the difference between analyst forecasts and pre-managed earnings growth, fourth quarter effective tax rates reduce relative to third quarter effective tax rates. The finding is in line with earnings management using total revenue and tax expenses (Linda, 2004).

Another study that investigated the Slovenian property insurers overestimated provisions for claims outstanding, and consequently, reduced net income in order to reduce tax liability. The findings suggest that Slovenian property insurers underestimate provisions for claims outstanding in order to reduce income tax burden (Morec, 2012). Frank *et al.* (2009) find that insufficient costs exist to offset financial and tax reporting inducements, such that nonconformity between financial accounting standards and tax law allows firms to manage book income upward and taxable income downward in the same reporting period. The study examined how managers choose to use their discretion over the amount of unrecognized tax assets to carry forward losses that are accessible under the income statement method specified in AASB 1020.

Managers of firms with pre-tax earnings below the median analyst earnings forecast manipulate earnings lower than expected in post-tax earnings figure. After-tax profit figure manipulates up strategically using

unrecognized deferred tax accruals from carry-forward losses and find that no proof of revenue-decreasing earnings management toward this target (Herbohn *et al.,* 2010). The above studies show different findings on how the tax has been used to manage earnings upward or downward, but no study has found any relationship on the extent to which corporate tax increasing/decreasing earnings. It is hypothesized by the study that:

H7: There is a positive relationship between corporate tax and discretionary accruals.

### 3.3.8 Corporate Profit (CP) and Earnings Management

Corporate profit is considered as a key indicator of a firm's ability to pay dividends (Anil & Kapoor, 2008). When a company reports higher book income, shareholders will expect more dividend payout. Lintne (1956); and Baker, Farrelly, and Edelman (1985) show that the previous year's dividend and current year's earnings contribute to determining dividend payment method of the firm. Baker *et al.* (1985) report that the anticipated amount of future earnings is the contributing factor of dividend payment. Pruitt and Gitman (1991) report that the present and previous years' profits are significant factors in influencing dividend payments. Baker and Powell (2000) find that dividend payout is peculiar to the business nature of a firm and expect that the level of future income is a major determinant of dividend payout.

Amidu and Abor (2006) indicate that corporate profitability and dividend payout ratios are positively correlated. Gill, Biger, Tibrewala, and Palmer (2010) find that for the entire sample of manufacturing and service sectors, the dividend payout ratio is positively related to profit margin. A study by Lintne, (1956); and Prices and Puckett (1964) finds that firms with bigger profit are more likely to pay the dividend, while companies that face uncertainty about future profit receive a smaller payout. John and Muthusamy (2010) reveal that ROA is positively associated with the dividend payout. Literature indicates that the profit is the determining factor for dividends; as managers increase their earnings, shareholders will definitely ask for better dividends. Consequently, managers may decide to report original earnings to avoid pressure from the shareholders, but no study has found that any relationship between corporate profit and earnings management directly. The study hypothesizes that:

H8: There is a negative relationship between corporate profit and discretionary accruals.

### 3.3.9 Moderating Effect of Institutional Ownership on the Relationship between Financial Expertise in the Audit Committee and Discretionary Accruals

Studies have established the relationship between financial expertise in the audit committee and discretionary accruals. For example, Yang and Krishnan (2005) failed to find a significant relationship between the existence of financial expertise and quarterly discretionary accruals. Defond

*et al.* (2005) show favoritism only to financial experts with an accounting background or expertise on the audit committee. Akhigbe and Martin (2006) reveal a favorable valuation effect of the audit committee members with financial expertise in the pre-SOX Act 2002 financial services industry. Dhaliwal *et al.* (2007) report a positive relationship between accruals quality and accounting expertise. Wen and Hsu (2015) reveal that institutional investors with high ownership encourage managers to manipulate discretionary accruals for short time profit.

Similarly, the relationship between institutional investors and earnings management has been established. For instance, Hsu and Koh (2005) report that the transient and long-term institutional investors co-exist and have differential effects on earnings management. Charitou, Lambertides and Trigeorgis (2007) indicate that the management of distressed companies with lesser (higher) institutional ownership has greater (lesser) tendency to manage earnings downwards. Ali and Zhang (2015) report that institutional ownership significantly reducing earnings management. Mousavi Rad, Salehi and Vali Pour (2016) disclose that institutional investors have significantly reduced earnings management. Literature established evidence of the association between institutional investors and earnings management but no study that establishes the interaction effect of institutional investors on the relationship between financial expertise in audit committee and earnings management.

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The current study introduces institutional investors to moderate the relationship between financial expertise in the audit committee and discretionary accruals because institutional investors put more controls in the investee organization through their representation in the audit committee to safeguard their investments (Koh, 2003; Siregar & Utama, 2008). The power of the institutional investors' representatives will empower the financial expertise in audit committee to monitor financial reporting process effectively and reduce earnings management. It is hypothesized by the present study that:

H9: Institutional shareholding moderates the relationship between financial expertise in the audit committee and discretionary accruals, specifically, to be stronger (more negative).

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### 3.3.10 Moderating Effect of Institutional Ownership on the Relationship between Independent Audit Committee and Discretionary Accruals

Various researchers have reported the effects of audit committee independence on earnings management. Jenkins (2002) reports that independent audit committee mitigates revenue-increasing earnings management. Akhigbe and Martin (2006) find that SOX Act 2002 shows favorable influence on market valuation in financial service firms with majority-independent audit committees and independent boards. Petra (2007) indicates a positive association between earnings informativeness and board independence. However, he finds no association between earnings

informativeness and independent audit committee. Chang and Sun (2009) disclose that markets react positively to the disclosure of a fully independent audit committee after SOX Act 2002. Furthermore, the effect of institutional investors has established in Koh (2003), which reports that the relationship between institutional investors and destructive earnings management is positive at the lower level of institutional ownership and negative at a higher level of institutional ownership. Latif and Abdullah (2015) indicate that institutional ownership has significantly increased earnings management. Hsu and Koh (2005) suggest that the transient and long-term institutional investors co-exist and have differential effects on earnings management. Trigeorgis *et al.* (2007) indicate that the management of distressed firms with lower (higher) institutional ownership has greater (lesser) tendency to manage earnings downwards. Iraya *et al.* (2015) conducted a study on the relationship between corporate governance and earnings management in Nairobi and find that institutional ownership (ownership concentration) significantly reduces earnings management. Susanto and Pradipta (2016) show that institutional investors significantly reduce real earnings management. Existing literature established evidence of the relationship between institutional investors and earnings management but no study establishes the interaction effect of institutional investors on the relationship between audit committee independence and earnings management.

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A fully independent audit committee, as anticipated by regulators, has an effect in monitoring managers' behavior. The interaction effect of institutional investors is expected to enhance the quality of earnings. The influence of the institutional investors' representatives will empower the non-executive and independent directors in audit committee to take an independent decision on monitoring the financial reporting process to reduce earnings management. It is hypothesized by this study that:

H10: Institutional shareholding moderates the relationship between independent audit committee and discretionary accruals, specifically, to be stronger (more negative).

### 3.3.11 Moderating Effect of Institutional Ownership on the Relationship between Audit Committee Size and Discretionary Accruals

Different studies on audit committee size and discretionary accruals have reported different findings. For example, Vafeas (2005) finds that performance of the audit committee is determined by the size of the committee. The report states further that many members of the audit committee will enhance performance because there are more people to draw on. Ghosh *et al.* (2010) find that audit committee size influences discretionary accruals at the pre-code period and not at the post-code period. Fodio *et al.* (2013) find that audit committee size is significant and negatively associated with discretionary accruals. Miko and Kamardin (2015) compared the effect of corporate governance mechanisms in the pre- and post-code 2011 and find that institutional ownership significantly

reduces earnings management. Lakhal (2015) find that institutional investors have significantly reduced earnings management.

Similarly, the association between institutional investors and earnings management has shown mixed findings. For instance, Bushee (2001) reports that institutional non-block owners are interested in short-run investments more than long long-run investments. Koh (2003) finds that the relationship between institutional investors and destructive earnings management is positive at the lower level of institutional ownership and negative at a higher level of institutional ownership. Hsu and Koh (2005) suggest that the transient and long-term institutional investors co-exist and have differential effects on earnings management. Siregar and Utama (2008) report that institutional ownership does not significantly encourage managers to improve earnings. Previous literature shows evidence of the association between institutional investors and earnings management but no study that establishes the interaction effect of institutional investors on the relationship between audit committee size and earnings management.

The institutional investor, as moderator, is expected to moderate the relationship between audit committee size and discretionary accruals because institutional investors' control in the investee organization is reported to be powerful (Koh, 2003). The power of the institutional investors' representatives will empower the audit committee with a large

size to monitor financial reporting process effectively and reduce earnings management. The study hypothesizes that:

H11: Institutional shareholding moderates the relationship between audit committee size and discretionary accruals, specifically, to be stronger (more negative).

## 3.4 Research Methodology

### 3.4.1 Research Design

This study relies on the positivism school of thought. The positivism approach is the approach that deals with the deductive, quantitative, scientific and experimental framework, where researchers look for standard quantifiable observations which regularly use statistics and experiments to test hypotheses (Neuman, 2005). The best method of the positivism approach is an archival analysis of published sources (Clark & Hons, 1998). This study uses the deductive approach to explains the role of the board of directors, the audit committee, corporate tax, corporate profit and institutional shareholders in earnings management. The main aim of this study is to examine the association between corporate governance, institutional ownership as moderator, corporate tax and company profit in detecting, discouraging and minimizing earnings management using Nigerian listed data. This study uses the quantitative approach to measures the relationship between the dependent and independent variables, which are: board of directors' characteristics, the audit committee characteristics,

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corporate tax, company profit and the moderating effect of institutional ownership on discretionary accruals, respectively.

### 3.4.2 Population of the Study

Nigeria as one of the developing countries which suffered from corporate collapses periodically needs more research using the data of the local environment that will provide solutions to its peculiar problems. Currently, Nigeria has193 listed companies in the Nigerian Stock Exchange which comprise of financial and non-financial firms. The population of this study is limited to non-financial firms listed in the Nigerian SEC as at December 31, 2013. There is a total of 137 non-financial firms from 10 groups of industries. The choice of non-financial firms is based on the fact that financial firms are heavily regulated by other industry-specific laws which differentiate their behaviors with the non-financial firms.

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The period of study is five years (2009-2013). This is because full compliance with the corporate governance code is highly expected during that period. Secondly, we expect availability of data in the annual financial reports of the companies for the variables used in this study.

### 3.4.3 Sample Size

The sample of the study comprises 81 firms selected based on the availability of data. For the 81 companies out of 137 companies, we can get

available data to calculate discretionary accruals, corporate governance mechanisms and firm characteristics.

### 3.4.4 Tool of Analysis

The study uses the independent t-test to measure the extent of earnings management, considering two years before and after the 2011 Code. Multiple regressions is used to measure the extent of the association between corporate governance mechanisms, firm characteristics and discretionary accruals in Nigerian listed firms. We employ the Modified Jones Model by Dechow *et al.* (1995) to estimate discretionary accruals.

### 3.4.5 Model Specification of Earnings Management

Discretionary accruals is chosen to proxy earnings management. Accrual is the difference between earnings and operating cash flows. Discretionary accruals reflect biased accounting choices by the managers; for example, estimation of bad debt and depreciation expenses; while non-discretionary accruals depend on the activity level of the company. Previous researchers have developed many methods for measuring discretionary accruals, but Dechow *et al.* (1995) is considered as the best model that detect earnings management because of the following reasons:

1. The Modified Jones Model is the powerful model that identifies earnings management (Armstrong, Guay, & Weber, 2010; Dechow *et al.*, 1995).

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2. Earnings can be manipulated more easily using credit sales than cash collected. The Modified Jones Model is the model that has been improved to detect earnings management when sales are manipulated (Dechow *et al.*, 2010). We used this model because we expect Nigerian firms manipulate earnings through sales accruals.
3. Some recent studies have also used the Modified Jones Model (1995) (Fodio *et al.*, 2013; Rahman & Ali, 2006; Uwuigbe *et al.*, 2014; Mohamad *et al*., 2012).
4. Mohamad *et al.* (2012) report that Dechow *et al.* (1995) compared the performance of five models in detecting earnings management in literature and concluded that the Modified Jones Model (1995) is the most powerful model for detecting earnings management.
5. Other popular measurements, such as Dechow and Dichev (2002), have concentrated on short-time accruals: Kothari *et al.'s* (2005) model has been used for detecting earnings management when performance is the target; Francis *et al.'s* (2005) model suffers innate estimation errors predicted from residuals regression (Dechow *et al.*, 2010); while Dechow *et al*.'s (2012) model requires periods more than the scope of the present research.

#### *3.4.5.1* Measurement of Discretionary Accruals as Dependent Variable of the Study

The present study uses Modified Jones model to estimate discretionary accruals. Receivable accounts have been considered by Dechow *et al.*

(1995) to become the Modified Jones Model. The Modified Jones Model is stronger and better for estimating discretionary accruals (Dechow *et al.,* 1995). Some of the previous research used this measurement (Fodio *et al.*, 2013; Iraya *et al.*, 2015; Mohamad *et al.*, 2012; Rahman & Ali, 2006; Uwuigbe *et al.*, 2014). The study uses OLS method of regressions (using STATA statistical package) to estimate coefficients for each industry and year which enable the calculation of non-discretionary accruals using the model below:

$TAC/A_{it-1} = \alpha_1 (1/A_{it-1}) + \alpha_2 (\Delta REV_{it}/A_{it-1}) + \alpha_3 (PPE_{it}/ A_{it-1}) + \mu_{it-1.}$

Discretionary accruals (DA) in the event period are:

$DA_{it}= TAC/A_{it-1} - [\alpha_1 (1/A_{it-1}) + \alpha_2 (\Delta REV_{it}/A_{it-1} - \Delta REC_{it}/A_{it-1}) + \alpha_3 (PPE_{it}/ A_{it-1})]$.

Where $TAC_{it}$= total accruals for firm i in year t.

$A_{it-1}$ = total assets for firm i in the previous year.

$\Delta REV_{it}/A_{it-1}$ = change in revenues from i in year t.

$\Delta REC$= is a change in accruals receivables for firm i in period t.

$PPE_{it}/ A_{it-1}$ = gross property and equipment for firm i in year t.

$\mu_{it-1}$ = error term for firm i year t.

Where $\alpha_1$, $\alpha_2$ and $\alpha_3$ are coefficients estimated based on each industry- and year-specific as used by Davidson, Goodwin-Stewart and Kent (2005); and Kasznik *et al.* (1999). The residuals are the discretionary accruals (absolute) representing earnings management.

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### 3.4.6 Measurements of Independent Variables

This study uses three sets of independent variables: board characteristics, audit committee characteristics and firm characteristics; and ownership characteristics as moderator, which is explained below.

#### *3.4.6.1 Board of Directors' Variables*

Board of directors is the most important unit that influences the integrity of the financial accounting process, whose responsibility is to provide independent oversight of management performance and to hold management accountable to investors for their actions (Dechow & Skinner, 2000; DeFond & Jiambalvo, 1994). The measurement of board characteristics that are considered in this study are as follows:

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##### 3.4.6.1.1 Board Independence

Board independence is measured as the proportion of non-executive directors to the total directors on the board (Fodio *et al.*, 2013; Mohamad *et al.*, 2012). The study chooses this measurement because of the availability of the firms' information. Carcello *et al.* (2002) report that non-executive directors are ready to work honestly for a higher quality report in order to protect their image and to promote shareholders' interest.

#### 3.4.6.1.2 CEO Duality

CEO duality refers to a situation where a director serves both as CEO and chairman of the board (SEC Code, 2011). The study measures the variable with the value "1" when there is CEO duality and "0" otherwise (Brickley *et al.*, 1997; Rahman & Ali, 2006). We choose to measure CEO duality using a dummy because it is a variable that cannot be quantified by numbers. Jensen (1993) reports that the role of the Chair of the board is to monitor the CEO. Therefore, one person cannot perform both functions without conflicts of interest. For the board to be effective and to perform its critical functions, it is essential that the position of the chair and CEO is separate.

#### 3.4.6.1.3 Directors' Shareholdings

Directors' shareholding is measured as the total shares held by the directors to the total number of shares issued (Miko & Kamardin, 2015; Rose *et al.*, 2013). The agency theory points out that directors' stock ownership might reduce the level of conflict of the interest between the management and shareholders (Jensen & Meckling, 1976). Table 3.1 shows the measurement summary of the group variables under the board of directors mechanisms (board independence, CEO duality and directors stock ownership).

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**Table 3.1**

***Measuring of Board Mechanisms***

| Variables | Abbreviation | Measurements | Theory |
|---|---|---|---|
| Board Independent | BOIN | Is the proportion of non-executive directors to the total directors of the board (Fodio et al., 2013; Mohamad et al., 2012) | Agency theory |
| CEO Duality | CEOD | Dummy variable indicating "1" if CEO is the chairperson of the firm, otherwise "0" (Brickley et al., 1997; Rahman & Ali, 2006) | Agency theory |
| Directors' Stock Holding | DH | Shares held by the directors to the total number of shares issued out (Rose et al., 2013). | Agency theory |

#### *3.4.6.2 Audit Committee Variables*

The audit committee is a body delegated by the board to preserve and advance the interests of shareholders. The audit committee is seen as a monitoring mechanism intended to reduce information asymmetries among insiders and outsiders, since its key functions are to increase the quality and accuracy of financial information by frequently monitoring the management's opportunistic behavior (Crutchley, Jensen, & Marshall, 2007; Davidson, Goodwin-Stewart, & Kent, 2005; Klein, 2002b; Pucheta-martínez & Fuentes, 2007). The audit committee has many characteristics, but this study uses financial expertise in the audit committee, audit committee independence and audit committee size based on the previous research findings that these variables are capable of mitigating earnings management.

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#### 3.4.6.2.1 Financial Expertise in the Audit Committee

This study measures audit committee financial expertise as the proportion of audit committee members that have served a year or more in the audit committee, i,e previous experience in audit committee of at least one year and above (Naiker & Sharma, 2009).

#### 3.4.6.2.2 Audit Committee Independence

The study measures audit committee independence as the proportion of non-executive directors and independent non-executive directors to the total directors in the audit committee (Fodio *et al.*, 2013; Rahman & Ali, 2006). There are three categories of directors: independent non-executive directors, executive directors and non-independent non-executive directors. This study considers the proportion of non-executive directors and independent non-executive directors to the total directors in the audit committee.

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#### 3.4.6.2.3 Audit Committee Size

This study measures audit committee size as the number of audit committee members (Fodio *et al.*, 2013; Saleh, Iskandar, & Rahmat, 2007). Audit committee size is expected to increase the quality and accuracy of the reporting process of the financial statement. Researchers have put forward that a big audit committee tends to enhance the audit committee's status and power in an organization (Kalbers & Fogarty, 1993). Table 3.2 indicates the measurement summary of the group variables under audit committee

mechanisms (financial expertise in audit committee, audit committee independence and audit committee size).

**Table 3.2**

***Measuring of Audit Committee Mechanisms***

| Variables | Abbreviation | Measurements | Theory |
|---|---|---|---|
| Financial Expert in Audit Committee | FEAC | Proportion of audit committee directors who serve in the committee at least a year and have experience of the process to the total number of directors in the audit committee (Naiker & Sharma, 2009). | Agency theory |
| Audit Committee Independent | ACIN | Proportion of non-executive audit committee members to the total audit committee members (Fodio et al., 2013; Rahman & Ali, 2006). | Agency theory |
| Audit Committee Size | ACS | Number of audit committee members (Fodio et al., 2013; Saleh, Iskandar, & Rahmat, 2007). | Agency theory |

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### *3.4.6.3 Firm Characteristics*

These are the factors which can be easily considered by the managers when thinking of manipulating earnings.

#### 3.4.6.3.1 Corporate Tax

Corporate tax can simply be measured as the natural log of the current year's tax. Tax is an important revenue generation unit to the government; tax discourages firms from increasing or decreasing both reported financial income and reported tax to avoid greater regulatory scrutiny (Frank *et al.,* 2009). Previous studies used deferred tax or the difference between tax and

the book income or mathematical tax models to manage earnings. No previous study has used log of the current year tax before but the current study used this measurement in order to capture the current year tax pay for the economic activities of the period.

#### 3.4.6.3.2 Corporate Profit

Corporate profit can be measured as the natural log of the current year's profit before tax. This measurement is considered because it captures the real economic activities of the period. Profit is considered as the key signal of a firm's ability to pay dividends (Anil & Kapoor, 2008). Other measurements, like ROA or ROE, are the ratios of two different variables that may be used to measure performance, whereas log of the current year's profit before tax is used to measure the influence in reducing earnings management. Table 3.3 indicates the measurement summary of the group variables under firm characteristics (corporate tax and corporate profit).

**Table 3.3**
***Measuring of Firms Characteristics***

| Variables | Abbreviation | Measurements | Theory |
|---|---|---|---|
| Corporate Tax | CT | Natural log of the current year tax | Political cost theory |
| Corporate Profit | CP | Natural log of the current year profit before tax . | Ethical theory |

### 3.4.7 Moderator

Moderator simply means a qualitative or quantitative variable that affects the relationship (positively or negatively) between independent variables (predictor) and the dependent variable (criterion variable) (Zahra & Pearce, 1989). Institutional investor is introduced in the study to moderate the inconsistent relationship between audit committee and earnings management.

#### *3.4.7.1 Institutional Ownership*

The study measures institutional ownership as the number of shares owned by the institutional owners to the total number of shares issued by the firm (Hsu & Wen, 2015; Koh, 2003; Siregar & Utama, 2008). This study chooses institutional investors to moderate the relationship between audit committee and earnings management because institutional investors have the opportunity, resources and ability to oversee, discipline and influence managers (Shleifer & Vishny, 1986). Table 3.4 shows the measurement summary of the moderator (institutional ownership).

**Table 3.4**
***Measuring of Moderator***

| Variables | Abbreviation | Measurements | Theory |
|---|---|---|---|
| Institutional Ownership | IO | The number of shares owned by the institutional investors to the total numbers of shares issued in the firm (Hsu & Wen, 2015; Koh, 2003; Siregar & Utama, 2008). | Agency theory |

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### 3.4.8 Control Variables Measurements

Control variables comprise the characteristics of the firm, including the characteristics that can control other firm's characteristics, and which can influence discretionary accruals. It is not easy to control the incentives involved in discretionary accruals activities, which include management style, corporate culture and integrity, due to the measurement problem (Archambeault, 2002). This includes some of the variables used by previous researchers: firm size, financial leverage, cash flow, unprofitable companies and industry.

#### *3.4.8.1 Firm Size (FZ)*

Firm size is measured as the natural logarithm of the total assets as used in previous research (Fodio *et al.*, 2013; Rahman & Ali, 2006). Firm size has been reported to have the negative and significant relationship with discretionary accruals (Wen & Hsu, 2015). Jatiningrum, Abdul-hamid, Muse and Popoola (2016) show that firm size has a significant negative relationship with earnings management. Lakhal (2015) finds that firm size has the negative and significant association with discretionary accruals. Miko and Kamardin (2016) show that firm size has the negative and significant association with earnings management. In another study, firm size is positively and significantly related to discretionary accruals (Uwuigbe *et al.*, 2015). Mousavi Rad *et al.* (2016) disclose firm size has a positive and significant association with earnings management. Studies have

disclosed that larger firms are expected to have systematically smaller discretionary accruals because of their operational nature, such as greater stability and ability to select and appoint experienced external auditors (Becker, Defond, & California, 1998; Dechow & Dichev, 2002; Klein, 2002b; Koh, 2007; Lee, Lev, & Yero, 2006; Peasnell*et al.,* 2005; Rahman & Ali, 2006; Srinidhi & Gul, 2006; Yip *et al.,* 2011). In line with the above argument, this study expects a negative relationship between firm size and discretionary accruals.

#### *3.4.8.2 Financial Leverage (FL)*

Leverage is measured using total debts divided by total assets (Dimitropoulos & Asteriou, 2010; Jouber & Fakhfakh, 2012). Firms that are constrained by interest coverage debt covenants may resort to earnings management. However, constant monitoring by debt holders may reduce earnings management. Several studies, such as Klein (2002b); and Knechel, Sharma and Sharma (2012), have shown that leverage is positively associated with discretionary accruals. Leverage is positively and significantly related to discretionary accruals (Miko & Kamardin, 2015; Uwuigbe *et al.*, 2015). Mousavi Rad *et al.* (2016) disclose that financial leverage has a significant positive association with earnings management. In other studies, leverage is reported to have negative and significant relationship with discretionary accruals (Ali & Zhang, 2015; Wen & Hsu, 2015). Srinidhi and Gul, (2006); and Zhou and Elder (2004) report that higher leverage minimizes earnings management. Jatiningrum *et al.* (2016) find that financial

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leverage has negative and significant association with earnings management. Lakhal (2015) finds that financial leverage has negative and significantly relationship with discretionary accruals. Based on the above argument, the current study does not take a stand on the expected relationship.

#### *3.4.8.3 Cash Flow (CFO)*

Cash flow is measured as cash flow from operations scaled by total asset (Miko & Kamardin, 2015). The present study uses cash flow from operations to capture the performance differences and control the impact of economic activities on earnings management across the companies in all non-financial industries. Studies justify that higher cash flow from operations is correlated with lower earnings management (Becker *et al.*, 1998; Dechow *et al.*, 1995). Cash flow has negative and significant relationship with discretionary accruals (Ali & Zhang, 2015). Cash flow has positive and significant relationship to discretionary accruals (Miko & Kamardin, 2015).

#### *3.4.8.4 Unprofitable Companies (LOSS)*

Loss is measured as "1" for companies that report loss and otherwise, "0" (Barth, Landsman, & Lang, 2008). Loss is an indicator variable signifying that firms that report loss have higher tendencies to manage earnings. Previous studies have found that firms that have incurred losses have more tendency to manage earnings using accruals (Ashbaugh, LaFond, &

Mayhew, 2003; Dechow & Dichev, 2002; Srinidhi & Gul, 2006). Furthermore, loss has negative and significant relationship to discretionary accruals (Ali & Zhang, 2015; Wen & Hsu, 2015).

#### *3.4.8.5 Industry*

Industry is used in this study as control variable. Numbers are assigned as dummy ("1" is assigned to the healthcare industry with the least discretionary accruals, and otherwise, "0") to measure the industry effect. Table 3.5 discloses the measurement summary of the group variables under control variables (firm size, financial leverage, cash flow unprofitable companies and industry).

**Table 3.5**
***Measuring Control Variables***

| Variables | Abbreviation | Measurements | Theory |
|---|---|---|---|
| Firm Size | FZ | Natural log of the total asset of the firm (Fodio et al., 2013; Rahman & Ali, 2006). | Agency theory |
| Financial Leverage | FL | Total debt divided by total asset of the firm (Dimitropoulos & Asteriou, 2010; Jouber & Fakhfakh, 2012). | Agency theory |
| Cash Flow from Operation | CFO | Cash flow from operation scaled by total asset (Miko & Kamardin, 2015). | Agency theory |
| Unprofitable Companies | LOSS | Dummy variable showing '1' to loss before tax and otherwise '0' (Barth *et al.,* 2008). | Agency theory |
| Industry | INDUSTRY | Dummy variable indicating a number to healthcare industry. i.e '1' for healthcare industry with least discretionary accruals, '0' for otherwise industries. | Agency theory |

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### 3.4.9 General Model Specifications

This study aims to find the moderating effect of institutional ownership between corporate governance and earnings management. This study employs regression model to determine the extent of the influence of each independent variable and control variable of the study on discretionary accruals. The models below are used to test the hypotheses.

Model 1:

$$\mathbf{DA_{it} = \beta_o + \beta_1(BOIN)_{it} + \beta_2(CEOD)_{it} + \beta_3(DH)_{it} + \beta_4(FEAC)_{it} + \beta_5(ACIN)_{it} + \beta_6(ACS)_{it} + \beta_7(CT)_{it} + \beta_8(CP)_{it} + \beta_9(IO)_{it} + \beta_{10}(FZ)_{it} + \beta_{11}(FL)_{it} + \beta_{12}(CFO)_{it} + \beta_{13}(LOSS)_{it} + \beta_{14}(INDUSTRY)_{it} + \mu_{it}} \quad \mathbf{(1)}$$

Model 2:

$$\mathbf{DA_{it} = \beta_o + \beta_1(BOIN)_{it} + \beta_2(CEOD)_{it} + \beta_3(DH)_{it} + \beta_4(FEAC)_{it} + \beta_5(ACIN)_{it} + \beta_6(ACS)_{it} + \beta_7(CT)_{it} + \beta_8(CP)_{it} + \beta_9(IO)_{it} + \beta_{10}(FEAC*IO)_{it} + \beta_{11}(ACIN*IO)_{it} + \beta_{12}(ACS*IO)_{it} + \beta_{13}(FZ)_{it} + \beta_{14}(FL)_{it} + \beta_{15}(CFO)_{it} + \beta_{16}(LOSS)_{it} + \beta_{17}(INDUSTRY)_{it} + \mu_{it}} \quad \mathbf{(2)}$$

Where:

DA: discretionary accruals obtained from Dechow *et al*. (1995).

BOIN: is the proportion of non-executive directors to the total directors on the board.

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CEOD: dummy variable indicating "1" if CEO is the chairperson of the firm, otherwise "0"

DH: total shares held by the directors to the total number of shares issued.

FEAC: proportion of audit committee directors who serve in the committee at least a year in the audit committee to the total number of directors in the audit committee.

ACIN: proportion of non-executive and independent directors in audit committee to the total audit committee members.

ACS: number of audit committee members.

IO: the number of shares owned by the institutional investors to the total numbers of shares issued in the firm.

CT: natural log of the current year's tax.

CP: natural log of the current year's profit before tax.

FZ: natural log of the total assets of the firm.

FL: total debt divided by total assets of the firm.

CFO: cash flow from operations scaled by total assets.

LOSS: dummy variable showing '1' to loss before tax and otherwise '0'.

INDUSTRY: dummy variable indicating a number to healthcare industry, i.e., '1' for healthcare industry with least discretionary accruals, '0' otherwise.

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### 3.4.10 Sources of Data

This study collected data from individual firms' annual reports. The variables used in this investigation are the board of directors (BOIN, CEOD and DH); audit committee (FEAC, ACIN and ACS; firm characteristics (CT & CP); moderator (IO); control variables (FZ, FL, CFO, LOSS & INDUSTRY); and the absolute discretionary accruals (DA) model was collected from individual firm's annual reports.

The study focuses on companies that are quoted publicly, due to their uniformity and availability of audited annual reports which meet the requirements of the regulatory body.

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### 3.4.11 Cleaning data

In line with statistical tradition, researchers are required to clean their data before they engage in statistical diagnoses and multivariate regression analyses (Gujarati, 2004; Hair Black, Babin, & Anderson, 2010). Thus, the data were diagnosed through the process of checking the accuracy of the data, analyzing missing values, checking outliers, testing for normality and multicollinearity, as discussed below:

### 3.4.12 Data Accuracy

Previous studies have established the need for proofreading of the manual used for the data collection (annual reports) and comparing it with another

source (Tabachnick & Fidell, 2007). The accuracy of the data of the present study was guaranteed by making a comparative analysis of the hand collection data of prior year in the second year report when collecting the figures. Furthermore, the study compared these data with other data collected by two PhD students having similar variables and also found them to be similar.

### 3.4.13 Missing Values

The issue of missing values is inevitable, especially for multivariate analysis. Missing values are "where valid values on one or more variable/s is/are not available for analysis" (Hair *et al.*, 2010). This study identified a few missing values in some variables. There are many ways to handle missing data (Hair JR *et al.*, 2010; Tabachnick & Fidell, 2007). However, the study chose to ignore the missing values since they are less than 10% (Hair *et al.*, 2010).

### 3.4.14 Identifying Outliers

Hair *et al.* (2010) posit outliers as "observations with a unique combination of characteristics identifiable as distinctly different from other observations". Outliers can lead to the bias of the mean and variance of the data set (Lee & Lings, 2008). These can equally distort and mislead the statistical result. There are different ways to check outliers (Tabachnick & Fidell, 2007). This study followed other studies (Kothari *et al.*, 2005; Kraft,

Lee, & Lopatta, 2014; Saleh *et al.*, 2005; Yoon, Miller, & Jiraporn, 2006) that have used the winsorized variables distributions to stabilize the outliers. The study normalizes the extreme values from original observations to normal observations at a minimum level of one percent at the top and bottom by winsorizing the variables in order to maintain the original data characteristics.

### 3.4.15 Normality Test

Normality test is the test for the quality of the data distribution of the sample. The test explains how normally the data is distributed, which enables the researcher to generalize findings obtained from the sample of the population with a higher level of accuracy. Excessive deviations from a normal distribution cause the result to be distorted, which leads to the wrong generalization.

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The normality of the data can be checked based on how closer the line is to the diagonal line (center) using the normality plots test. According to Tabachnick and Fidell (2007), it is not compulsory to test for the individual variables' normality where the error term meets the normality assumption. Studies have shown that skewness and kurtosis statistical descriptive methods are used to test for normality of the variables. Skewness is the side shift of the distribution and kurtosis is the "peakedness" or "flatness" of the distribution. The threshold for the skewness is not higher than +/- 3 (Hair *et*

*al.*, 2010); and kurtosis is not higher than +/- 10 (Leys, Ley, Klein, Bernard, & Licata, 2013).

This study, conducted a test for normality for dependent and all explanatory variables for the skewness and kurtosis and the result indicates that skewness and kurtosis are not a problem for the DA, BOIN, CEOD, DH, FEAC, ACIN, ACS, IO, CT, CP, FZ, FL, CFO, LOSS and INDUSTRY variables.

### 3.4.16 Multicollinearity Test

Multicollinearity test is the test for the explanatory variables that are correlated in a model. In a situation where the variance of two predictors is extremely correlated, one must be dropped to enable the other one to explain the variance of the dependent variable. While multicollinearity is detected through the use of the correlation matrix, the variables and their correlation must not be more than 0.80 (Gujarati, 2004). Where it is found to be more than 0.80, there is a strong signal of multicollinearity. Then, further tests of variance inflation factor (VIF) will confirm the situation. This study conducted a correlation matrix using Spearman correlation which explains the non-existence of a variable with more than 0.8 as indicated in Table 4.9. The VIF is employed to check for multicollinearity. The outcome, as presented in Table 4.10, signifies that the higher VIF value is 4.86 and the mean VIF is 1.90, which are within the acceptable threshold of 10, as

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presented by Hair *et al.* (2010). Therefore, multicollinearity is not an issue in this study.

### 3.4.17 Heteroskedasticity Test

This is a test carried out for the fulfillment of the statistical assumption. Heteroskedasticity is seen as the unequal degree of variation throughout the range of the dependent variable (Hair *et al.*, 2010), but when residuals vary at equal values of the predictor variables, it shows homoskedasticity (Osborne & Waters, 2002). Heteroskedasticity has an effect on significance tests which results in the distortion of the result (Tabachnick & Fidell, 2007). In this study, test for heteroskedasticity reveals that chi-square is 0.77 and p-value is 0.379, which is not significant, indicating that the variance is homoskedastic.

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The next chapter starts with descriptive statistics of the Modified Jones Model (1995) for detect earnings management, follow by descriptive statistics of the variables which consist of continuous and non-continuous variables and descriptive statistics of discretionary accruals based on industry as classified by the Nigerian SEC. The chapter analyses pre- and post- CG code 2011 discretionary accruals, higher and low discretionary accruals and correlation matrix. Regression assumption analyses of Multicollinearity, Heteroskedasticity, skewness, kurtosis and linearity are presented. OLS result and the analyses of the findings are discussed. Finally,

additional analyses of earnings management models, pre- and post-CG code 2011, the extent of earnings management, contributions of groups in the study model and alternative variable measurements were carried out.

### 3.4.18 Summary

This chapter explains the conceptual framework of the study, which consists of eight independent variables, one dependent variable (discretionary accruals), one moderator (institutional ownership) and five control variables. The chapter also states 11 hypotheses for the study. Eight of the hypotheses are direct hypotheses while the remaining three are indirect based on theories and empirical evidence from previous studies. The methodological section highlights the way and manner the research is carried out. The study uses the Modified Jones Model (1995) and other measurements for the independent variables. Also, the chapter explains the study population and sample, comprising 137 and 81 non-financial firms respectively. The selected rationale and measurement modality are also outlined. Sampling techniques and model of the study are discussed in this chapter as well.

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# CHAPTER FOUR

## DATA ANALYSES AND DISCUSSION

### 4.1 Introduction

This Chapter presents data analyses and discussion of the study. It starts with the presentation of the sample size categorized by industry followed by the correlation matrix, descriptive statistics, parametric tests and multivariate analyses used to test the hypotheses of the study. Results and discussions of the study are presented as well as additional analyses to test the robustness of the findings. Finally, a summary of the chapter is provided.

### 4.2 Sample Proportion

The research categorizes the total number of 193 listed companies on the Nigerian Stock Exchange into financial companies (56 companies representing 29%); and non-financial companies (137 companies representing 71%). Out of 137 non-financial companies, 56 companies were excluded because of missing information which left the sample size of the study 81 companies representing 42%. The details of the sample size are presented in Table 4.1.

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**Table 4.1**
***Population and Sample of the Study***

| Population from 2009 to 2013 | Units | % |
|---|---|---|
| Total listed firms in Nigeria Stock Exchange | 193 | 100 |
| Minus: | | |
| Financial Companies | 56 | 29 |
| Total Population (Non-financial firms) | 137 | 71 |
| Minus: | | |
| Companies with Incomplete Information and Data | 56 | 29 |
| Total Sample (Total firm-year observations 405) | 81 | 42 |

Table 4.2 shows the total of 81 companies from 10 groups of industries. Consumer goods industry has the largest number of companies with 19 companies representing 23.5% of the sample. This is followed by the services industry with 15 companies representing 18.5%; industrial goods with 11 companies representing 13.6%; oil and gas sector with eight companies representing 9.9%; ICT industry with seven companies representing 8.6%; and the conglomerate and healthcare industries with six companies each, representing 7.4% . The agriculture, construction and real estate, and natural resources industries comprise four, three and two companies, representing 4.9%, 3.7% and 2.5%, respectively. The firm-year observations of the study are (5years by 81 firms) 405. The details of the each industry are presented in Table 4.2.

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[1]**Table 4.2**

***Categories of the Companies by Sectors***

| Industry Type | Industry Code | Number of Companies | Percentage (%) | Observations |
|---|---|---|---|---|
| Agriculture | 1 | 4 | 4.9 | 20 |
| Conglomerates | 2 | 6 | 7.4 | 30 |
| Construction and Estate | 3 | 3 | 3.7 | 15 |
| Consumer Goods | 4 | 19 | 23.5 | 95 |
| Health Care | 5 | 6 | 7.4 | 35 |
| ICT | 6 | 7 | 8.6 | 30 |
| Industrial Goods | 7 | 11 | 13.6 | 55 |
| Natural Resources | 8 | 2 | 2.5 | 10 |
| Oil and Gas | 9 | 8 | 9.9 | 40 |
| Services | 10 | 15 | 18.5 | 75 |
| Total Sample Size | 10 | 81 | 100% | 405 |

## 4.2 Estimation of Discretionary Accruals

The study follows the previous studies (Dechow *et al.*, 1995; Iraya *et al.*, 2015; Kasznik *et al.*, 1999; Mohamad *et al.*, 2012; Rahman & Ali, 2006; Yoon *et al.*, 2006) and uses pooled cross-sectional OLS method of estimation and tested the model to show the ability of the Modified Jones Model to decompose total accruals into discretionary accruals and non-discretionary accruals. The study provides the details of the Model in Table 4.3 which discloses the parameter estimates of discretionary accruals Model based on Dechow *et al*. (1995).

[1]The Table 4.2 is the classification of industries based on the Securities and Exchange Commission as at 31 December, 2013.

**Table 4.3**
***Descriptive Statistics of Parameters Estimation of Discretionary Accruals***

$DA=TAC/A_{it-1}-[\alpha_1(1/A_{it-1})+\alpha_2(\Delta REV_{it}/A_{it-1}-\Delta REC_{it}/A_{it-1})+\alpha_3(PPE_{it}/A_{it-1})]$

| Parameter | Mean | Min | Max | Coefficients | t-statistics |
|---|---|---|---|---|---|
| $TAC/A_{it-1}$ | 1.141 | 0.009 | 15.131 | | |
| $1/A_{it-1}$ | 0.000 | 0.000 | 0.000 | -39777.125 | -1.478* |
| $\Delta REV-\Delta REC/A_{it-1}$ | 2.117 | -4.533 | 3.614 | 1.797 | 2.852** |
| $PPE/A_{it-1}$ | 0.503 | 0.000 | 11.275 | -1.018 | -25.852*** |
| Durbin Watson | | | | | 1.767 |
| $R^2$ | | | | | 0.589 |
| Adjusted $R^2$ | | | | | 0.586 |
| F-statistics | | | | | 191.370*** |

***, **, * is significant at 1, 5 and 10%, respectively. TAC/Ait-1 is the total accruals, 1/Ait-1 is the 1 divided by lagged total asset, ΔREV- ΔREC/Ait-1 is the changes in revenue divided by lagged total asset and PPE/Ait-1 is the plant, properties and equipment.

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The study estimates total accruals using cash flow approach as TAC = EBXI – CFO, where EBXI is earnings before tax and extraordinary items; and CFO is the cash flow from operations (Davidson *et al.*, 2005). The mean of the discretionary accruals Model for the parameters $TAC/A_{it-1}$, $1/A_{it-1}$, $\Delta REV- \Delta REC/A_{it-1}$, and $PPE/A_{it-1}$ are 1.141, 0.000, 2.117 and 0.503, respectively. On average, the study expects coefficient of change in revenue ($\Delta REV-\Delta REC/A_{it-1}$ ($\alpha_2$)) to be positive and lower than the change in plant, property and equipment. The coefficient of $PPE/A_{it-1}$ ($\alpha_3$) is negative on average as it indicates that decrease in property, plant and equipment (PPE) for the firms is more of depreciation of the assets for the period (Davidson *et al.*, 2005). The Model is correctly specified and it decomposes total accruals

into discretionary and non-discretionary accruals (Bernard & Skinner, 1996; Davidson *et al.*, 2005).

The minimum values for $TAC/A_{it-1}$, $1/A_{it-1}$, $\Delta REV- \Delta REC/A_{it-1}$ and $PPE/A_{it-1}$ are 0.009, 0.000, -4.533 and 0.000, respectively. The maximum values are 15.131, 0.000, 3.614 and 11.275 for $TAC/A_{it-1}$, $1/A_{it-1}$, $\Delta REV- \Delta REC/A_{it-1}$, and $PPE/A_{it-1,}$ respectively. The autocorrelation test using Durbin-Watson (DW) test of 1.767 shows the absence of autocorrelation. The model fitness of $R^2$ is 0.586 and F-change is 191.370, which is significant at the 1% significance level, indicating that the Model is fit to decompose total accruals into discretionary and non-discretionary accruals.

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## 4.3 Descriptive Statistics

### 4.3.1 Descriptive Statistics of the Variables

The descriptive statistics are based on mean, minimum and maximum values, skewness and kurtosis. The study uses absolute discretionary accruals in order to capture both upward and downward discretionary accruals to a flat level to avoid directional discretionary accruals as used by other studies (Davidson *et al.*, 2005; Mohamad *et al.*, 2012; Rahman & Ali, 2006). The descriptive statistics of the variables are shown in Table 4.4 for continuous variables.

**Table 4.4**
***Descriptive Statistics of the Variables***

| Variables | Mean | Std. Dev. | Min | Max | Skewness | Kurtosis |
|---|---|---|---|---|---|---|
| DA | 0.549 | 0.831 | 0.001 | 9.109 | 0.000 | 0.000 |
| BOIN | 0.696 | 0.182 | 0.083 | 1.000 | 0.380 | 0.000 |
| CEOD | 0.014 | 0.106 | 0.000 | 1.000 | 0.000 | 0.000 |
| DH | 0.204 | 0.255 | 0.000 | 0.927 | 1.130 | 1.840 |
| FEAC | 0.761 | 0.230 | 0.167 | 1.200 | 0.000 | 0.000 |
| ACIN | 0.452 | 0.112 | 0.250 | 1.000 | 0.000 | 0.000 |
| ACS | 5.360 | 1.007 | 2.000 | 9.000 | 0.238 | 0.000 |
| CT | 5.145 | 1.045 | 3.000 | 7.979 | 0.127 | 0.020 |
| CP | 5.893 | 0.901 | 2.176 | 8.280 | 0.266 | 0.102 |
| IO | 0.410 | 0.300 | 0.000 | 1.000 | 0.132 | -1.117 |
| FZ | 0.825 | 0.053 | 0.684 | 0.936 | 0.345 | 0.844 |
| FL | 0.961 | 0.050 | 0.689 | 1.271 | 0.000 | 0.000 |
| CFO | 0.826 | 0.106 | 0.386 | 1.158 | 0.191 | 0.001 |
| LOSS | 0.272 | 0.445 | 0.000 | 1.000 | 0.000 | 0.000 |
| INDUSTRY | 0.086 | 0.281 | 0.000 | 1.000 | 0.000 | 0.000 |

**N=405**

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In Table 4.4, the mean of the absolute value of discretionary accruals is 0.549 which is lower than mean of discretionary accruals of 8.14 reported by Mohamad, Rashid and Shawtari (2012) for Malaysian companies. The mean is higher than that of Jaggi and Leung (2007) for Hong Kong companies 0.122; Saleh, Iskandar and Rahmat (2007) report a mean of -0.013; and Hashim and Devi (2007) report a mean of 0.050 for Malaysian companies. The minimum value of absolute discretionary accruals is 0.001 which is different from zero indicating that firms manage their reported earnings. The maximum discretionary accruals in the listed Nigerian non-financial firms is 9.109.

The mean of board independence (BOIN) is 0.696 (69.6%) which indicates that based on the study sample, on average, non-executive directors are more than executive directors on the boards of listed companies, showing that the boards are more independent. This is consistent with the CG Code 2011 requirement that all quoted companies in Nigeria must have at least five or more (depending on the size, complexity and activities of the company) directors on the board made up of mixed directors (executive and non-executive) and the majority must be non-executive directors. The mean of BOIN reported is lower than reported by Mohamad *et al.* (2012) in Malaysia 87.7% (for post-period). The minimum non-executive director ratio in the board is 0.083 which shows that before the CG Code 2011, there are many companies with less than 30% non-executive directors on the board, but for the present CG Code 2011, all companies comply with the policy to the extent that some boards have all non-executive directors which is the maximum, indicating 100 percent non-executive directors in the board.

CEO Duality (CEOD) is proxy using dummy "1" and "0". Based on the sample, the majority of the companies have separated the CEO and chairman positions, and very few firms have maintained CEO duality. This is consistent with the CG Code 2011 provision which outlines that position of CEO and chairman of the board of directors should be held by different

individuals. Companies that maintain CEO duality are negligible and they deviate from the corporate governance policy.

Directors' shareholdings (DH) are reported with mean up to 0.204 (20.4%). The minimum ratio value is 0.000046, indicating that there are some companies where their directors have the small number of shares in the company and the maximum ratio value is 0.972 (97.2%), indicating the maximum shareholdings of a director which are almost 100%. Similarly, maximum ratio value indicates that no single company has directors who own 100% shares. The CG Code 2011 is silent about directors' stocks ownership and there is no minimum or maximum limit for the directors in terms of share ownership. The mean of the present study is higher than the mean of 0.098 (9.8%) reported by Koh (2003) from Australia.

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The result reported in Table 4.4 also indicates that directors with a year of audit experience in the audit committee (FEAC) have a mean of 0.761 (76.1%) which is closer to one, indicating that most of the audit committees have experienced directors, which is in line with the requirement of the CG Code 2011 (at least one director who can read and understand financial terms). The minimum ratio is 0.167 which is above zero, indicating that in every audit committee, there are directors with at least one year experience which help the committee to discharge its responsibilities. The maximum value is 1 indicating that some audit committees have 100% financially

experienced directors, which help the audit committee to work effectively and efficiently in discharging its responsibilities. The financial expertise mean reported in this study is higher than the mean reported by Saleh *et al.* (2007) of 0.272 (27.2%), which shows higher financial expertise in the present study.

Audit committee independence (ACIN) is measured as the ratio of non-executive directors to the total directors in the audit committee. A mean of 0.452 (45.2%) is reported in Table 4.4 for the audit committees' independence. Based on the sample of our study, on average, audit committees consist of 45% non-executive directors. The CG Code, in terms of the audit committee, is silent on the proportion of executive and non-executive directors. The minimum ratio value is 0.250 which shows that no less than 25% are non-executive directors of each audit committee. Non-executive directors give an independent opinion on the issues in the committee as required by the CG Code. The maximum ratio value is 1, indicating 100% non-executive directors which justify that in every audit committee, there are non-executive directors to the extent that in some committees, all the members are non-executive directors. This implies higher transparency in discharging the activities of the audit committee.

The mean for the audit committee size is 5.360 indicating that on average, audit committees have five directors. The mean is higher than 3.6 (four

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directors) reported by Saleh *et al.* (2007) in Malaysia. Based on the study sample, the minimum directors in the audit committee is two and the maximum is nine. The CG Code 2011 does not limit the number of directors in the audit committee; it only requires that the audit committee size should be based on the nature, size, uniqueness and complexity of the company.

The mean of institutional ownership (IO) is 0.410 (41%) which indicates that on average, there are reasonable institutional ownership in the study sample. The minimum value is 0.000 and the maximum value is 1.000, which indicate that some companies are owned 100% by institutional owners, which can lead to board domination by representatives of institutional owners. The CG Code does not require the minimum or maximum number of shares to be owned by institutions in the public listed companies but requires them to participate in the board for their investment and also to ensure compliance with the rules and regulations.

Financial leverage (FL) is the ratio of total debt to total assets. The mean of financial leverage is 0.961 (96.1%) as reported in Table 4.4, indicating that there are a lot of debts in the public listed companies in Nigeria. This mean is higher compared to the mean of 0.210 (21%) reported by Rahman and Ali (2006) in Malaysian listed companies. The minimum ratio is 0.689, i.e., the lowest ratio of total debt to total assets in the study sample. The maximum

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ratio value is 1.271, which shows that some firms have total debts that are higher than their total assets.

Cash flow from operations (CFO) is measured by cash flow from operations divided by lagged total assets. The mean value is 0.826 (83%) which is less than the mean reported by Yunos, Ismail and Smith (2012) in Malaysia. The minimum cash flow from operations ratio in the sample is 0.386 and the maximum ratio value is 1.158.

Loss (LOSS) is measured using a dummy: loss before tax as "1", otherwise, "0". The percentage of companies that report losses is around 27%, which indicates that some firms in the sample are reporting a loss in their annual reports. This is in line with other researchers, such as Johl, Subramaniam and Zain (2012) from Malaysia who report about 28% companies in their sample report losses.

The industry grouping is based on the dummy "1" and "0". The industry minimum is 0 and maximum is 1 as reported in Table 4.4. The value of "0" is assigned to other industries with higher discretionary accruals and the value of "1" is for the healthcare industry with the least discretionary accruals.

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Normality test for normality of the data distribution was carried out to determine the skewness and kurtosis. The result shows that the data is skewed between 0.000 to 1.130 and kurtosis ranges from -1.117 to 1.844 for all variables in Table 4.4, indicating that the data are normally distributed.

Table 4.5 is the descriptive statistics of the variables which are transformed from their original nature to the require measurement of the study. These are corporate tax, corporate profit and total asset.

**Table 4.5**
***Descriptive Statistics of the Variables for the Require Measurements***

| Variables | Mean | Std. Dev. | Min | Max | Skewness | Kurtosis |
|---|---|---|---|---|---|---|
| CT (#Million) | 1414.000 | 6461.000 | 0.000 | 95225.000 | 11.655 | 153.535 |
| CP (#Million) | 4507.000 | 1.590 | -17961.0 | 190761.000 | 7.390 | 67.655 |
| TAsset (#Million) | 40326.000 | 8.894 | 69.000 | 843203.000 | 4.959 | 31.031 |

**N = 405**. Table 4.5 analyses the variables which were transformed to the require measurement. Corporate tax and corporate profit were transformed into natural log of corporate tax and corporate profit.

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Corporate tax (CT) is tax levy paid to the tax authorities from the income generated and it is measured by the natural log of the current year's tax paid. Table 4.5 shows that the average tax paid based on the study sample is 1414 million Naira. The minimum tax paid is 0.000, indicating that there are some firms running their businesses at a loss, which results in having non-taxable income. The maximum tax paid based on the study sample is about 95225 million Naira, indicating that some companies pay huge amounts of tax. Although corporate taxes are paid based on the fixed rates provided by the

federal government of Nigeria through the Federal Inland Revenue and no law compels a company to pay a certain minimum tax level.

Corporate profit (CP) is the profit generated in a particular period and it is measured by the natural log of the current year's profit before tax. Table 4.5 indicates that the minimum value of corporate profit/loss based on the study sample has a negative value of -17,961 million Naira, indicating that some companies declare losses in their financial report; while the maximum value reported is positive 190,761 million Naira, indicating that some companies report a profit in their financial reports.

Firm size (FZ) is measured by the natural log of total assets in order to control for the different size of the companies. As shown in Table 4.5, the mean of total assets is 40,326 million Naira. The minimum value of total assets is 69 million Naira, indicating that there are companies with small capital in the study sample; the maximum value is 843,203 million Naira.

### 4.3.2 Discretionary Accruals Based on Industry

Descriptive statistics of discretionary accruals are based on the industries as classified by the SEC (Nigeria). The classifications of industries are Agriculture, Conglomerates, Construction and Real Estate, Consumer Goods, Healthcare, ICT, Industrial Goods, Natural Resources, Oil and Gas and Services Industry. None of the sectors is excluded from the sample of the study. The details of industries classification are presented in Table 4.6

[2]**Table 4.6**

***Descriptive Statistics of Discretionary Accruals Based on Industry***

| Industry | Mean | SD | Min | Max | N |
|---|---|---|---|---|---|
| Agriculture | 0.646 | 0.439 | 0.002 | 1.567 | 20 |
| Conglomerates | 0.644 | 1.213 | 0.014 | 6.077 | 30 |
| Construction and Estate | 0.600 | 1.026 | 0.018 | 4.214 | 15 |
| Consumer Goods | 0.444 | 0.363 | 0.001 | 1.590 | 95 |
| Health Care | 0.310 | 0.201 | 0.016 | 0.922 | 35 |
| ICT | 0.553 | 0.547 | 0.044 | 3.117 | 30 |
| Industrial Goods | 0.523 | 0.734 | 0.031 | 5.173 | 55 |
| Natural Resources | 1.279 | 2.753 | 0.280 | 9.109 | 10 |
| Oil and Gas | 0.687 | 0.936 | 0.017 | 4.506 | 40 |
| Services | 0.566 | 0.857 | 0.001 | 6.541 | 75 |

**N=405**

The mean indicates that 0.310 is the lowest mean of discretionary accruals from the healthcare industry with the minimum value of 0.016 and the maximum value of 0.922. The highest mean of discretionary accruals is 1.279 from the natural resources industry with the minimum value of 0.280 and the maximum of 9.109. The result can be due to the higher level of capital inflow required in the sector which may lead to the higher discretionary accruals in the industry. The result indicates that the healthcare sector is the sector with the lowest managed earnings and the natural resources sector is the highest. The services and consumer goods industries are the sectors with the least discretionary accruals of 0.001 and natural resources sector has highest discretionary accruals of 9.109. This result is in line with the analysis of Beasley, Carcello, Hermanson and Lapides (2000)

[2] The periods of study are five years indicating that all industries observations are from ten and above.

that earnings management differs from one industry to another; one industry type of discretionary accruals may not be the same with other.

### 4.3.3 Comparison between Pre- and Post-Code 2011 Discretionary Accruals

This is a statistics comparison of discretionary accruals for the pre- and post-code 2011. The study uses two years (2009-2010) as pre-period and two years (2012-2013) as post-period. The t-test analysis is used to find out whether there is significant difference between the two groups. The study's assumption is that CG Code 2011 impacts positively to regulate negative manipulations of discretionary accruals. The study expects lower discretionary accruals in the post-CG Code 2011 period. The details of the result are presented in Table 4.7.

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**Table 4.7**
***Test of the differences of DA between Pre- and Post- Period***

| Period | Mean | SD | F-value | Sig |
|---|---|---|---|---|
| **Pre-period** | 0.712 | 1.298 | 17.883 | 0.000*** |
| **Post-period** | 0.418 | 0.365 | | |

***, **, * is significant at 1, 5 and 10%, respectively.

The result supports the assumption as presented in Table 4.7 (pre-period - mean value of 0.712, Standard Deviation (SD) value of 1.298) and the post-period (mean value of 0.418, SD value of 0.365) which show that mean of 0.712 of the pre-period is higher than the mean of 0.418 of the post-period, supported by the SD of the post-period which is less than the SD of the pre-

period, justifying that the CG Code 2011 regulation reduces the level of earnings management in the listed firms in Nigeria, which is significant at the 1% level (F-statistic is 17.883, p-value = 0.000).

This finding provides evidence that the revised CG Code 2011 has achieved the target of straightening the lapses and shortcomings in the 2003 Code. The result in Table 4.7 also indicates that earnings management in the post-code period (2011) is less than the earnings management in the post-code period (2003). This analysis answers the research question on the extent of earnings management in the pre- and post-code 2011 periods. The decisions of government and regulators to revise the 2003 Code have had a positive impact in solving agency problems between shareholders and managers.

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### 4.3.4 Comparison between Groups of Study Variables and Discretionary Accruals

The present study uses the median of explanatory variables as the cut-off point to divide the groups into two: high and low groups. T-test analysis for independent sample parametric test was used to check the differences between the two groups in terms of the level of earnings management. Table 4.8 reports the result of the descriptive statistics for the high and low discretionary accruals firms.

**Table 4.8**

***T-test Analysis Between Variables of the Study and Discretionary Accruals***

| Variables | GROUP | Mean | F-statistic | Sig. |
|---|---|---|---|---|
| BOID | LOW | 0.552 | 0.268 | 0.068* |
| | HIGH | 0.546 | | |
| CEOD | Non-Duality | 0.558 | 0.651 | 0.420 |
| | Duality | 0.361 | | |
| DH | LOW | 0.538 | 0.122 | 0.728 |
| | HIGH | 0.567 | | |
| FEAC | LOW | 0.523 | 0.039 | 0.843 |
| | HIGH | 0.574 | | |
| ACIN | LOW | 0.549 | 0.124 | 0.725 |
| | HIGH | 0.552 | | |
| ACS | SMALL | 0.495 | 3.359 | 0.068* |
| | BIG | 0.659 | | |
| CT | LOW | 0.553 | 0.096 | 0.757 |
| | HIGH | 0.545 | | |
| CP | LOW | 0.529 | 0.000 | 0.983 |
| | HIGH | 0.569 | | |
| IO | LOW | 0.460 | 0.869 | 0.352 |
| | HIGH | 0.595 | | |
| FZ | LOW | 0.505 | 2.403 | 0.122 |
| | HIGH | 0.593 | | |
| FL | LOW | 0.430 | 8.714 | 0.003*** |
| | HIGH | 0.688 | | |
| CFO | LOW | 0.540 | 0.099 | 0.799 |
| | HIGH | 0.558 | | |
| LOSS | Losses | 0.701 | 4.909 | 0.027** |
| | Profit | 0.492 | | |

Note: N[3]=162. ***, **, * is significant at 1, 5 and 10%, respectively.

The result in Table 4.8 indicates that companies with low non-executive directors (BOIN) (low group) manage earnings more than the companies with high non-executive directors (high group) which is significant at the 10% level. It indicates that boards with high independence reduce the level of earnings management. Firms with a high number of audit committee size

[3]Firm year observations in the in pre- CG Code 2011 are 162 and in the post CG Code 2011 is 162.



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(ACS) (BIG group) significantly manage earnings than companies (SMALL group) with a low number of directors in the audit committee. This reveals that size of the audit committee leads to increase in earnings management. Companies with high financial leverage (FL) (high group) significantly manage earnings more than companies with low financial leverage (FL) (low group). This shows that companies that have high debts manage earnings more than companies with low debts. Companies that have the loss (LOSS) significantly manage earnings more than companies that earn the profit. It shows that firms with loss manage earnings in order to cover their losses.

Firms which separate positions of the CEO and chairman of the board, and the firms that maintain CEO duality report, companies with high directors' shareholding (high group) and the firms with low directors' ownership (low group) manage earnings, companies with high financial expertise in the audit committee (FEAC) (high group) and firms with low financial expertise in the audit committee (low group) manage earnings, companies with more non-executive directors in the audit committee (ACIN) (high group) and companies with the smaller number of non-executive directors in the audit committee (low group) manage earnings, no significant differences between the two groups.

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Companies with high institutional ownership (IO) (high group) and companies (low group) with low institutional ownership manage earnings, corporate firms (high group) that pay high tax (CT) and the companies (low group) that pay low tax manage earnings, companies (high group) that report high corporate profit (CP) and the companies that report low profits manage earnings, no significant differences between the each variable two groups.

Corporate firms with high total assets (FZ) (high group) and the companies with small total assets (low group) manage earnings, no significant differences between the two groups. Companies with greater cash flow from operations (CFO) (high group) and the firms with low cash flow manage earnings, no significant differences between the two groups.

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### 4.3.5 Correlation Matrix of Variables

Correlation matrix indicates the relationship between dependent and independent variables and the relationship among the independent's variables. The correlations of the explanatory variables are tested for multicollinearity as a pre-condition for running the simple linear regression. The correlation calculates Pearson's coefficient and Spearman's coefficient and their significance levels at two tails as it is shown in Table 4.9.

**Table 4.9**

***Correlation Matrix of Variables***

| Variables | DA | BOIN | CEOD | DH | FEAC | ACIN | ACS | CT | CP | IO | FZ | FL | CFO | LOSS | INDUSTRY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **DA** | 1.000 | | | | | | | | | | | | | | |
| **BOIN** | -0.052 | 1.000 | | | | | | | | | | | | | |
| **CEOD** | 0.075 | -0.005 | 1.000 | | | | | | | | | | | | |
| **DH** | .106** | -0.070 | -0.027 | 1.000 | | | | | | | | | | | |
| **FEAC** | 0.001 | .1392*** | -0.041 | -0.062 | 1.000 | | | | | | | | | | |
| **ACIN** | -0.023 | 0.118* | .137*** | 0.062 | 0.022 | 1.000 | | | | | | | | | |
| **ACS** | -.229*** | 0.036 | -0.054 | -.381*** | 0.010 | -0.275 | 1.000 | | | | | | | | |
| **CT** | -0.005 | -.080* | 0.031 | -.336*** | 0.070 | 0.031 | .355*** | 1.000 | | | | | | | |
| **CP** | -.100** | .156** | -0.032 | .328*** | .107** | 0.047 | .364*** | .785*** | 1.000 | | | | | | |
| **IO** | -.101** | 0.070 | 0.022 | -.172*** | .281** | 0.004 | .140*** | .159*** | .222*** | 1.000 | | | | | |
| **FZ** | -.118*** | -.104** | 0.003 | -.270*** | .128*** | -0.036 | .430*** | .680*** | .803*** | .224*** | 1.000 | | | | |
| **FL** | -.352*** | .087* | 0.072 | -.110** | 0.017 | -0.150 | .247*** | 0.015 | 0.078 | 0.062 | .414*** | 1.000 | | | |
| **CFO** | -.698*** | 0.011 | -0.077 | -0.077 | 0.008 | 0.081 | .240*** | .264*** | 0.078 | .125** | .204*** | -0.019 | 1.000 | | |
| **LOSS** | -0.077 | .119** | -0.078 | 0.015 | -0.045 | -0.062 | -0.064 | -0.258 | 0.078 | 0.021 | -.097** | .128** | -0.131 | 1.000 | |
| **INDUSTRY** | .088* | 0.018 | .136*** | .175*** | 0.016 | -0.024 | -.109** | -.099** | 0.078 | -.096* | -.195*** | -.146** | 0.025 | 0.025 | 1.000 |

***, **, * is significant at 1, 5 and 10%, respectively at two tails. DA is the absolute discretionary accruals, BOIN is board independence, CEOD is chief executive officer duality, DH is the directors' shares ownership, FEAC is the financial expertise in the audit committee, ACIN is audit committee independence, ACS is audit committee size, CT is corporate tax, CP is corporate profit, IO is institutional ownership, FZ is firm size, FL is financial leverage, CFO is the cash flow from operations, LOSS is the unprofitable companies and INDUSTRY is the industry classification.

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Correlation matrix result based on Pearson's correlation in Table 4.9 shows that institutional ownership (IO), audit committee size (ACS), corporate tax (CT), firm size (FZ), financial leverage FL), unprofitable companies (LOSS) and cash flow (CFO) are negative and significantly correlated with discretionary accruals, which indicate that there is tendency of institutional ownership (IO), audit committee size (ACS), corporate tax (CT), firm size (FS), financial leverage (FL), unprofitable companies (LOSS) and cash flow (CFO) to reduce earnings management while directors shareholdings (DH) and INDUSTRY are positively and significantly correlated with discretionary accruals. It indicates the tendency of directors' shareholdings (DH) and INDUSTRY to increase earnings management.

Board independent (BOIN), CEO duality (CEOD), audit committee independent (ACIN), financial expertise in audit committee (FEAC) and corporate tax (CT) are correlated with discretionary accruals but not significant level.

The relationship of firm size (FZ) and corporate tax (CT) with board independent (BOIN) is negative and significant while the relationship of financial expertise in audit committee (FEAC), audit committee independence (ACIN), corporate tax (CP) and unprofitable companies (LOSS) with board independent (BOIN) is positive and significant. Audit committee independent (ACIN) and INDUSTRY are positively and

significantly correlated to CEO duality (CEOD). Audit committee size (ACS), corporate tax (CT), institutional ownership (IO), firm size (FZ) and financial leverage (FL) are negatively and significantly correlated to directors shareholdings (DH), while corporate profit (CP) and INDUSTRY are positively and significantly correlated with directors shareholdings (DH).

Corporate profit (CP), institutional ownership (IO) and firm size (FZ) are positively and significantly correlated to financial expertise in audit committee (FEAC). Corporate tax (CT), corporate profit (CP), institutional ownership (IO), firm size (FZ), financial leverage (FL) and cash flow (CFO) are positively and significantly correlated to audit committee size (ACS) while INDUSTRY is negatively and significantly correlated with audit committee size (ACS). Corporate profit (CP), institutional ownership (IO), firm size (FZ) and cash flow (CFO) are positively and significantly correlated with corporate tax (CT), while INDUSTRY is negatively and significantly correlated with corporate tax (CT). Institutional ownership (IO), firm size (FZ) and cash flow (CFO) are positively and significantly correlated to corporate profit (CP). Firm size (FZ) and cash flow (CFO) are positively and significantly correlated with institutional ownership (IO) while INDUSTRY is negatively and significantly correlated with institutional ownership (IO).

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FL and CFO are positively and significantly correlated with FZ while LOSS and INDUSTRY are negatively and significantly correlated with FZ. INDUSTRY is negatively and significantly correlated with FL while LOSS is positively and significantly correlated with FL.

The result in Table 4.9 shows that the highest correlated variables are CP and FZ with 0.803, followed by CP and CT with 0.785. The correlation values are acceptable based on the rule of thumb that correlation value is not more than 0.8 (Gujarati, 2004; Hair JR *et al.*, 2010). The correlation between CP and FZ has an approximate value of 0.8, which is within the acceptable level, subject to further test for multicollinearity.

### 4.3.6 Multicollinearity Test

The multicollinearity test of the independent variables of the study is shown in Table 4.10. The multicollinearity test result of each variable falls within the acceptable level as indicated by Gujarati (2004), that the value of VIF should not be more than 10. In the variables of the research Model, the highest VIF value comes from CP with 4.86 and the least VIF is 1.10 for CEOD. The VIF mean is 1.90, which testifies that multicollinearity is not an issue in the Model. Additional analysis was conducted to find out the independent contribution of CP and FZ in the model as shown in Table 1 appendix A.

**Table 4.10**
***Multicollinearity Test Result***

| Variable | VIF | Tolerance (1/VIF) |
|---|---|---|
| CP | 4.86 | 0.206 |
| FZ | 4.80 | 0.208 |
| CT | 3.09 | 0.324 |
| FL | 1.58 | 0.576 |
| ACS | 1.58 | 0.634 |
| DH | 1.32 | 0.756 |
| ACIN | 1.21 | 0.826 |
| CFO | 1.18 | 0.845 |
| IO | 1.17 | 0.851 |
| LOSS | 1.15 | 0.869 |
| BOIN | 1.15 | 0.871 |
| FEAC | 1.14 | 0.878 |
| INDUSTRY | 1.12 | 0.895 |
| CEOD | 1.10 | 0.912 |
| Mean VIF | 1.90 | |

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### 4.3.7 Heteroskedasticity Test

Homoscedasticity of the variance is the consistency of the residuals which are randomly distributed through various estimations in the presence of unequal variance (Hair *et al*. 2010). The rule of thumb is to accept the $H_0$ if the p-value is greater than 0.05, indicating that the variance is homoscedastic. The present study used the STATA statistical package and tested (Breusch-Pagan/ Cook-Weisberg test) for heteroscedasticity, i.e., to know the behaviors of variance. The result ($chi^2$ (1) = 0.77, prob > $chi^2$ = 0.379) indicates that the variance is homoscedastic because the chi-square is not significant at all levels.

### 4.3.8 Linearity Test

Linearity test is expected to test the changes of the relationship between independent and dependent variables (Hair *et al.*, 2010). In regression estimation, the linear relationship is expected between the dependent and independent variables (Hair *et al.*, 2010). The study tested for the linear relationship between the dependent and independent variables using a plotted distribution histogram of the residuals which show a normal curve distribution as in Figure 4.1.

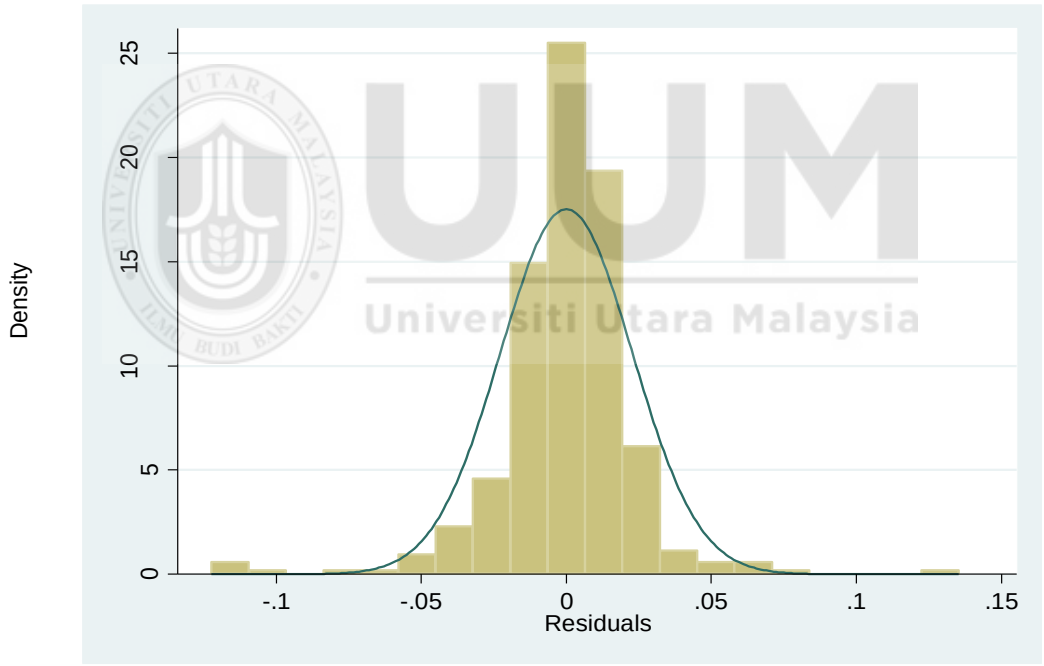


*Figure 4.1: Normality Curve of the Residuals*

### 4.3.9 Autocorrelation Test

The autocorrelation test shows whether dataset is generated from a random process. Durbin-Watson test is used to test autocorrelation of the error terms based on the rule of thumb that ranges from 0 to 4.0, where the average is 2.0 for a situation of no autocorrelation in the error terms (Kasznik *et al.*, 1999). A value less than 1.4 indicates strong positive series of correlations and a value above 2.6 indicates a strong negative series of correlations (Kazmier, 2003).

The present study tested for the autocorrelation with Durbin-Watson test using STATA statistical package after generating time variable. The result (*Durbin-Watson d-statistic (15, 405) = 1.603819)* indicates that Durbin-Watson value is 1.6 which is within the threshold of less than 2.6, showing the absence of the series of autocorrelation.

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## 4.4 Multivariate Analyses for Determinants of Discretionary Accruals

The Guss-marker theorem views that the OLS method is the best method of estimation if error terms are independent and identically distributed (Cottrell & Lucchetti, 2007; Wooldridge, 2003).

Having satisfied the assumptions for OLS, the study conducted Breusch and Pagan Lagrangian Multiplier Test as the best method of estimation between OLS and Generalized Least Squares (GLS) that suit the data. Since the p-value is not significant, the data supports the OLS method of estimation. The

study then estimated regression analyses using pooled OLS cross-sectional data analyses for the general models to examine the relationship between corporate governance mechanism and discretionary accruals.

The next section below shows the multivariate analyses on the relationship between the board of directors, audit committee, firms' characteristics, moderating effect of institutional ownership and control variables against the level of discretionary accruals of listed firms in Nigeria. The result of the regression of this study is shown in Table 4.11.

### 4.4.1 Result and Discussion of the Models

This section presents the results and discussion of findings of the study and additional analyses conducted to support the findings of the study.

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#### *4.4.1.1 Determinants of Discretionary Accruals*

Table 4.11 explains the result of the two Models used in the study. Model 1 is the result of the study without interaction. Model 2 is the result of the study with interaction. Table 4.11 (Model 1) reveals that the F-statistic value of 63.580 is positive and significant at the 1% level in the Model. The constant value is positive and significant at P<0.000. The $R^2$ value which is the Model fitness of 0.695 shows that independent variables (board independent (BOIN), directors shareholding (DH), CEO duality (CEOD), financial expertise in audit committee (FEAC), audit committee independence (ACIN), audit committee size (ACS), corporate tax (CT), and

corporate profit (CP), moderator institutional ownership (IO) and control variables (firm size (FZ), financial leverage (FL), cash flow (CFO), unprofitable companies (LOSS) and INDUSTRY) explain about 70% of the Model.

This is a better result compared to the $R^2$ reported by Abdullah and Nasir (2004); Hashim and Devi (2007); and Rahman and Ali (2006) of 0.05, 0.10, 0.13, respectively, using the original Jones Model (1991) on the relationship between corporate governance and earnings management in Malaysia. Similarly, this study's $R^2$ of 0.70 is lower than $R^2$ of 0.89 reported by Fodio, Ibikunle and Oba (2013) who conducted a study on the relationship between corporate governance variables and earnings management in Nigeria.

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Similarly, Model 2 of the regression analyses result presented in Table 4.11 points out that F-statistic value of 55.890 is highly significant at the 1% level. The constant value of the regression Model is positive and highly significant at P<0.000. The research Model fitness based on the $R^2$ value of 0.710 indicates that board independent (BOIN), directors shareholding (DH), CEO duality (CEOD), financial expertise in audit committee (FEAC), audit committee independence (ACIN), audit committee size (ACS), corporate tax (CT), corporate profit (CP), institutional ownership (IO), moderation effect of institutional ownership in audit committee (IO*ACS,

IO*FEAC, IO*ACIN), firm size (FZ), financial leverage (FL), cash flow (CFO), unprofitable companies (LOSS) and INDUSTRY variables account for 71% of the Model, while the remaining 29% is explained by other variables not captured by the model. Model 2's result is better due to the inclusion of the interaction variable.

**Table 4.11**
***[4]General Model of Discretionary Accruals Determinants***

| | | Model One | | | Model Two | | |
|---|---|---|---|---|---|---|---|
| **Variables** | **Sign** | **coefficient** | ***t*-statistic** | **p-value** | **coefficient** | ***t*-statistic** | **p-value** |
| BOIN | - | 0.008 | 1.170 | 0.121 | 0.013 | 1.910 | 0.029** |
| CEOD | + | 0.005 | 0.940 | 0.175 | 0.008 | 1.390 | 0.083* |
| DH | + | 0.007 | 1.600 | 0.056* | 0.008 | 1.950 | 0.026** |
| FEAC | - | -0.003 | -0.630 | 0.266 | 0.108 | 3.540 | 0.000*** |
| ACIN | - | -0.016 | -1.410 | 0.080* | 0.052 | 0.880 | 0.189 |
| ACS | - | -0.002 | -1.340 | 0.091* | 0.007 | 0.610 | 0.273 |
| CT | + | 0.006 | 3.120 | 0.001*** | 0.006 | 3.160 | 0.001*** |
| CP | - | -0.007 | -2.620 | 0.005*** | -0.009 | -3.050 | 0.001*** |
| IO | - | -0.001 | -0.240 | 0.406 | -0.003 | -0.670 | 0.253 |
| FZ | +/- | 0.228 | 4.770 | 0.000*** | 0.260 | 5.490 | 0.000*** |
| FL | +/- | -0.372 | -12.230 | 0.000*** | -0.406 | -13.100 | 0.000*** |
| CFO | +/- | -0.292 | -24.750 | 0.000*** | -0.288 | -24.840 | 0.000*** |
| LOSS | +/- | -0.008 | -2.750 | 0.003*** | -0.007 | -2.510 | 0.001*** |
| IDUSTRY | +/- | 0.001 | 2.300 | 0.011** | 0.001 | 2.120 | 0.018** |
| IO*FEAC | - | | | | -0.022 | -3.750 | 0.000*** |
| IO*ACIN | - | | | | -0.016 | -1.290 | 0.099** |
| IO*ACS | - | | | | -0.000 | -0.170 | 0.432 |
| Constant | +/- | 1.428 | 50.080 | 0.000*** | 1.310 | 23.170 | 0.000*** |
| R-Squared | | | 0.695 | | | 0.710 | |
| Adj. $R^2$ | | | 0.684 | | | 0.698 | |
| F-value | | | 63.580 | | | 55.890 | |
| Sig | | | 0.000*** | | | 0.000*** | |

[4] Model one is the regression model of the study without moderation while Model two is the regression model which includes moderation effect of institutional ownership in audit committee.

**N = 405. ***, **, *** is significant at 1, 5 and 10%, respectively. Note: The dependent variable is absolute discretionary accruals, BOIN is board independence, CEOD is chief executive officer duality, DH is directors' shares ownership, FEAC is the financial expertise in the audit committee, ACIN is audit committee independence, ACS is audit committee size, CT is corporate tax, CP is corporate profit, IO is institutional ownership, FZ is firm size, FL is financial leverage, CFO is cash flow from operations, LOSS is the unprofitable companies, INDUSTRY classification is dummy '1' and '0', IO*FEAC is the interaction effect of institutional ownership in audit committee financial expertise, IO*ACIN is the interaction effect of institutional ownership in audit committee independence and IO*ACS is the interaction effect of institutional ownership in audit committee size.

#### 4.4.1.1.1 Board Independence and Earnings Management

The study expects a negative and significant relationship between board independence and discretionary accruals. The result (coefficient value 0.008, *t*-statistic 1.170, p-value 0.121) indicates that BOIN does not affect discretionary accruals, justifying that BOIN does not reduce earnings management activities. But the essence of providing the services of non-executive directors in the board is to influence board decision toward independent judgments. Similarly, the study found that on average, the majority of non-executive directors help the board to make independent judgments which will lead to transparency and accountability of the shareholders' fund. Furthermore, the more the BOIN increases, the more the board will mitigate agency problem in the company. However, this study finds that board independence does not curb earnings management. This can be due to the influence of management in appointing non-executive directors or non-executive directors overstaying in the board to the extent that managers can influence their decisions. According to Davidson *et al.*, (2005), the board of directors' inability to control irregularities might be due to non-executive directors is largely independent of management. The

study's finding is consistent with the findings of Abdullah and Nasir (2004); and Rahman and Ali (2006); and inconsistent with the findings of Davidson *et al.* (2005); Marra, Mazzola and Prencipe (2011); Osma and Noguer (2007); Peasnell, Pope and Young (2005); and Xie, Davidson and DaDalt (2003), who find that board independence significantly curbs earnings management.

Similarly, in Model 2, the results show that one unit increase in board independence leads to 0.013 increase in discretionary accruals (coefficient value 0.013, *t*-value 1.910, p-value 0.029). The relationship between BOIN and DA is positive and significant at the 5% level which is contrary to the assumption of the study. The result shows that board independence significantly increases earnings management. This result supports the findings of Abdullah and Nasir (2004); Petra (2007); Rahman and Ali (2006); and Saleh and Iskandar (2005). On the other hand, it is contrary to the findings of Marra *et al.* (2011); Osma and Noguer (2007); Peasnell *et al.* (2005); and Xie *et al.* (2003) who reveal that board independence plays a vital role in reducing earnings management. The finding of Model 2 is in line with the finding of Model 1, for the fact that interaction variable introduced affected the present finding which changes from positive non-significant to positive significant and it not support the hypothesis because it increased earnings management instead of decreasing earnings management.

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#### 4.4.1.1.2 CEO Duality and Earnings Management

CEO duality usually encourages earnings management based on the agency theory. In Model 1, a positive and significant relationship is expected between CEO duality and discretionary accruals. Table 4.11 (coefficient value 0.005, t-statistics 0.940, p-value 0.175) shows that CEO duality has no significant effect between CEO duality and discretionary accruals is established. Similarly, based on the sample of this study, we find that most companies separate the positions of CEO and chairman of the board, which is in line with the CG Code that requires every public listed company to maintain separate individuals as CEO and chairman of the board. Separation of the two positions will reduce the excessive power of one individual officer who can use that power to manipulate financial reporting process and other issues in the board. For other companies that maintain CEO duality are expected to manipulate earnings.

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The regression result in Model 2 shows that CEO duality increases earnings management. This is consistent with Gul and Wah (2002); and Klein (2002). Similarly, it supports the findings of Mohamad *et al.* (2012) that separating the CEO and the chairperson has a negative effect on earnings management. The finding of Model 2 has changed from non-significant relationship between CEO duality and earnings management in the Model 1 to positive and significant relationship due to the introduction of interaction variable that affects the findings in the Model.

#### 4.4.1.1.3 Directors' Shareholding and Earnings Management

Directors' shareholdings (DH) are expected to have a significantly positive relationship with discretionary accruals. The results (coefficient value 0.007, *t*-statistics value 1.600, p-value 0.056) as outlined in Table 4.11 in Model 1, show that directors' shareholding significantly increases discretionary accruals. We find that on average, about 20% of the company's shares are owned by the directors of the board. Some studies (Cheng & Warfield, 2005; Larcker *et al.*, 2004) have shown that the board of directors' ownership increases earnings management which is consistent with the finding of the present study. Some of the reasons for the board of directors to manipulate accounting numbers is to create additional value to their own stocks, and to expropriate and enrich themselves. Based on the finding of this study, reducing directors' ownership will lead to better transparency and accountability, due to the fact that corporate governance is silent about the minimum or maximum shares to be owned by the directors in public listed companies. The result supports the notion that management ownership is associated with earnings management (Cheng & Warfield, 2005; Larcker *et al.*, 2004). However, some studies are of the view that directors with share ownership will not agree with the management to manage earnings (Rose *et al.*, 2013).

Similarly, the result in Model 2 shows that any unit increase in directors' shareholding leads to 0.008 increase in discretionary accruals. The result supports the expectation of the study (coefficient value 0.008, *t*-value 1.950,

p-value 0.026) that management ownership is associated with earnings management (Cheng & Warfield, 2005; Dechow *et al.*, 2010; Larcker *et al.*, 2004). However, the result is inconsistent with Rose *et al.* (2013), who find that directors with stock ownership are less likely to agree with management's manipulation. The positive and significant finding of the relationship between directors' shareholdings and earnings management in Model 1 has not changed in Model 2 due to the interaction effects of the moderation introduced in the Model. Model 2 confirms the result, supporting the agency theory that minimizing directors stock ownership leads to the decrease in agency cost.

#### 4.4.1.1.4 Financial Expertise in Audit Committee and Earnings Management

Financial expertise in the audit committee (FEAC) is expected to have a significantly negative relationship with discretionary accruals. In Model 1, results in Table 4.11 (coefficient value -0.003, *t*-statistic value -0.630, p-value 0.266) are contrary to the expectation of the study. The financial expertise in audit committee is insignificantly affecting discretionary accruals. It means FEAC cannot substantially decrease earnings Management in a firm based on the result of this study. The present study measured financial expertise of a director with experience in audit committee. This is in addition to the minimum requirement of the code which requires at least one director who can read the financial statement and understand. Director with at least one year in the audit committee can read

and understand the financial statement. Companies in the study sample comply with the requirement because all audit committees have at least one director with the accounting background and on average, 76 percent of the audit committee directors have experience of a year or more in the audit committee. With this experience a year or more in the committee, the audit committee can mitigate earnings managements. The finding of this study reveals that FEAC is not mitigating earnings management. There are many reasons that may lead to this finding based on our views, for example, the inability of the experts to equip and update themselves with the latest manipulation methods. Secondly, different measurement of financial expertise may cause the different result. Thirdly, over-stay of directors in the audit committee can lead to management influencing their decisions and lastly, holding additional responsibility in another capacity.

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In Model 2, the outcome shows that a one unit increase in FEAC leads to 0.108 increase in discretionary accruals (coefficient value 0.108, *t*-value 3.540, p-value 0.000), which is contrary to the expectation of the study. The relationship between financial expertise in the audit committee and discretionary accruals is positive and significant at the 1% level. Some of the reasons that may cause differences in the results are the different measurement of financial expertise may cause different results, over-stay of directors in the audit committee can lead to management influencing their decisions and holding additional responsibility in another capacity. The

finding of Model 2 shows a significantly positive association between financial expertise and earnings management, which slightly deviates from the findings of Model 1 as a result of interaction variable included in Model 2.

#### 4.4.1.1.5 Audit Committee Independence and Earnings Management

Audit committee independence (ACIN) is expected to have a significantly negative relationship with discretionary accruals. The outcome reveals that any unit increase in ACIN leads to -0.016 decrease in discretionary accruals. It indicates that there is a significantly negative relationship between ACIN and discretionary accruals as shown in Model 1, Table 4.11 (coefficient value -0.016, *t*-statistic value -1.410, p-value 0.080), which is in line with the assumption of the study. The finding supports the agency theory by confirming that the board can mitigate agency conflict. The CG Code requires public listed firms to have mixed directors comprising executive and non-executive directors with the majority of non-executive directors on the board. Listed companies comply with the CG Code that majority of the board members must be non-executive directors. The finding of this study reveals that ACIN significantly reduces earnings management, which is also in line with the findings of Bradbury, Mak and Tan (2006) from Singapore; Piot and Janin (2007) from France; and inconsistent with the findings of Yusof (2010) from Malaysia. The reasons of mixing non-executive directors in the board are to provide an independent judgment of the board's decisions and to ensure transparency and accountability of shareholders' investments.

With these duties of non-executive directors assigned by the CG Code, earnings management can be reduced to a minimum level as testified by many studies, including the present study.

In Model 2, the result shows that a one unit increase in ACIN leads to 0.052 increase in discretionary accruals. The finding is not in line with the expectation of this study because the result fails to establish a significantly negative relationship between ACIN and DA. Table 4.11 shows that the result (coefficient value 0.052, *t*-statistic value 0.880, p-value 0.189) of the relationship is not significant. This result is consistent with the findings of Rahman and Ali (2006); Hadani, Goranova and Khan (2011); and Yusof (2010). The result is inconsistent with the findings of Bradbury *et al.* (2006); and Piot and Janin (2007). Introducing interacting variable in Model 2 changes the initial result in Model 1 from a significantly negative relationship between the variables to an insignificant association between the variables.

#### 4.4.1.1.6 Audit Committee Size and Earnings Management

Audit committee size (ACS) is expected to have a significantly negative relationship with discretionary accruals. The result shows that a one unit increase in ACS leads to -0.002 decrease in discretionary accruals as shown in Table 4.11. Model 1 (coefficient value -0.002, *t*-statistics value -1.340, p-value 0.091) indicates that audit committee size significantly reduces earnings management at the 10% level which supports the assumption of the

study. The finding also supports the agency theory that audit committee size reduces agency problems. Although the CG Code does not provide a minimum or a maximum number of directors in the audit committee, it requires that the audit committee should be based on the company's nature, size, complexity and uniqueness of its activities. In the present study sample, there are audit committees with directors ranging from two to nine which shows that audit committee's size depends on the nature and complexities of the companies. The present finding in Model 1 is consistent with the findings of Kent, Routledge and Stewart (2010); Yang and Krishnan (2005); Lin, Li and Yang (2006); and Fodio *et al.* (2013); it is inconsistent with the finding of Abbott, Parke and Peters (2004); Davidson *et al.* (2005); and Sun, Salama, Hussainey and Habbash (2010) who reveal that audit committee size does not significantly improve the quality of accounting numbers. Many directors in the audit committee will assist the committee to discharge its responsibilities diligently through a division of labor which will lead to the efficiency and accountability of the committee.

However, Model 2 shows contrary results; the finding of the study shows that a one unit increase in ACS leads to 0.007 increase in discretionary accruals and is not significant. This is contrary to the assumption of the study as it can be seen in Table 4.11 (coefficient value 0.007, *t*-value 0.610, p-value 0.273). This is in support of the previous research findings, such as Baxter and Cotter (2009); Abbott *et al.* (2004); Davidson *et al.* (2005) and

Sun *et al.* (2010) who reveal that audit committee size does not significantly improve the quality of accounting numbers. However, it is contrary to the findings of Kent *et al*. (2010); Yang and Krishnan (2005); Lin, Li and Yang (2006); and Fodio *et al.* (2013) who find that audit committee size contributes significantly to reduce earnings management and enhances the quality of financial reporting. Model 2's insignificant association between the variables changes from the initial findings from Model 1's negative and significant relationship between the variables due to the introduction of interaction variable in the model.

#### 4.4.1.1.7 Corporate Tax and Earnings Management

Corporate tax (CT) is expected to have a significantly positive relationship with discretionary accruals. The result shows that a one percent increase in corporate tax leads to 0.006 increase in discretionary accruals as shown in Table 4.11 in Model 1 (coefficient value 0.006, t-statistics value 3.120, p-value 0.001), thus supporting the expectation of the study. The result indicates that corporate tax is significantly and positively related to earnings management which means that corporate tax increase leads to significant increase in earnings management. The taxation system in Nigeria is regulated by the Federal Inland Revenue Board under the Taxation Act which requires a fixed value to be paid out of the profit generated within a stipulated time. In the study sample, most of the companies show evidence of paying tax in the annual reports except companies that report zero value of tax, which indicates that they did not make profit or they are exempted

from paying tax for that period. This clearly shows that if managers manipulate companies' earnings and increase the value of profit reported for the period, definitely managers will have to pay tax out of the shareholders' fund which is going to affect the value of the company later. As such, managers may decide not to manage earnings. From this argument, we expect a positively significant relationship between corporate tax and earnings management and the study's result supports the assumption. The simple reason is that they have the same direction based on this study's finding.

It is established in Model 2 that a one percent increase in corporate tax leads to 0.006 increase in discretionary accruals (coefficient value 0.006, *t*-value 3.160, p-value 0.001), which shows that the relationship is positive and significant at the 1% level. The result of the relationship in Model 2 is the same as in Model 1. It shows that the result is not affected as a result of the interaction variable introduced in the model.

#### 4.4.1.1.8 Corporate Profit and Earnings Management

Corporate profit (CP) is expected to have a significantly negative relationship with discretionary accruals. The result shows that a one percent increase in corporate profit leads to -0.007 decrease in discretionary accruals. The outcome (coefficient value -0.007, t-statistics value -2.620, p-value 0.005) as shown in Table 4.11 in Model 1 supports the assumption, justifying that corporate profit significantly plays a vital role in reducing

earnings management. We expect managers to ethically report profits under the certification of external auditors. However, there are no regulations that compel companies to report a certain level of profit as minimum or maximum; it is based on the companies' activities during the period. The finding supports the agency theory that corporate profit contributes to mitigating agency issues. Based on the study sample, some companies report the huge amount of profit, some report the small amount of profit, some report zero amount and some companies report losses, although most of the companies report a profit. Reporting huge amount of money as profits in annual reports will inspire investors that their investments yield good returns but investors will ask for more benefits for their invested capital (e.g., dividend). Where managers manage earnings that increase the level of their reported profit, managers will pay the dividend out of the shareholders' fund which will have a negative effect on the shareholders' investments. As a result of this argument, the study expects a significantly negative relationship between corporate profit and earnings management and the finding supports the assumption. The possible reason for finding this result is that managing earnings upward to boost profit leads to excessive claim from investors, that in turn, leads to agency problems.

Furthermore, Model 2's outcome as shown (coefficient value -0.009, *t*-value -3.050, p-value 0.001) reveals that a one percent increase in corporate profit leads to -0.009 decrease in discretionary accruals and it is significant at the

1% level, which supports the study's hypothesis. The finding of Model 1 is not changed as a result of the introduction of the interacting variable in Model 2, meaning that Model 1 and Model 2 have the same result.

#### 4.4.1.1.9 Institutional Ownership and Earnings Management

Institutional ownership (IO), as interaction variable in the study, is expected to have a significantly negative relationship with discretionary accruals. The result in Model 1 shows that a one unit increase in institutional ownership leads to -0.001 decrease in discretionary accruals as shown in Table 4.11 (coefficient value -0.001, *t*-statistics value -0.240, p-value 0.406). IO shows a negatively insignificant relationship. It indicates that institutional owners cannot influence discretionary accruals to a lower level. It is discovered in the sample of the study, that some companies have no element of institutional shares ownership but some firms indicate almost 100% of their shares are owned by institutional owners. On average, about 40% of the shares are owned by institutional shareholders although the CG Code does not require institutional owners to have a minimum or maximum number of shares in public listed companies; however, their participation in the board is required in order to protect public interest in the decisions taken and in the general affairs of the company. The outcome of this study shows the relationship between institutional ownership and earnings management is not significant. The interacting power of institutional ownership in the audit committee is expected to boost the audit committee functions so as to have maximum power to mitigate earnings management in the listed companies.

Balsam, Bartov and Marquardt (2002) disclose that institutional owners can access relevant timely information more than non-institutional investors, so they can easily identify opportunistic earnings management and constrain it.

Model 2 (coefficient value -0.003, *t*-statistic value -0.670, p-value 0.253) reveals that a one unit increase in IO leads to -0.003 decrease in discretionary accruals. The direct relationship between institutional ownership and discretionary accruals is not significant, showing that direct relationship between institutional investors and discretionary accruals cannot influence discretionary accruals decrease but the interaction effect of institutional owners in the audit committee is expected boost the committee's performance to curb earnings management. The result of the moderator in Model 1 is the same compared to Model 2.

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**4.4.1.1.10 Firm Size and Earnings Management**

Firm size (FZ) has a positively significant relationship with discretionary accruals as shown in Model 1, Table 4.11 (coefficient value 0.228, *t*-statistics value 4.770, p-value 0.000). The result shows that a one percent increase in asset of the company leads to 0.228 increase in discretionary accruals. It indicates that the more the asset of the firm increases, the more it will manage earnings. At times when companies have large asset, they may not involve all the capital in the best investment that will yield higher performance; investors will expect huge amount of money as profits because of the huge amount of investment, so that higher expectation on the

managers leads them to manage earnings higher than companies with lower capital.

The result in Model 2 discloses that firm size is positive and significant at the 1% association with discretionary accruals (coefficient value 0.260, *t*-value 5.490, p-value 0.000). This shows that a one percent increase in firm capital leads to 0.260 increase in discretionary accruals. This indicates that discretionary accruals increase based on firm size. The result is the same in both Models.

#### 4.4.1.1.11 Financial Leverage and Earnings Management

Financial leverage (FL) shows a negatively significant relationship between FL and discretionary accruals. It indicates that any unit increase in FL leads to -0.372 decrease in discretionary accruals. The result (coefficient value -0.372, *t*-value -12.230, p-value 0.000) as shown in Model 1, Table 4.11 justifies that financial leverage plays a role in reducing earnings management. Companies that employed high debt in the capital of their business will manage earnings higher than those companies that employed lower debt in their capital because investors will ask for more returns apart from the huge amount needed to service their debts. The study expects a negative relationship between the variables and the result confirms.

The outcomes of the study in Model 2 reveal that financial leverage is negatively and significantly associated with the level of discretionary

accruals at the 1% level as shown in Table 4.11 (coefficient value -0.406, *t*-value, -13.100, p-value 0.000). It indicates that a one unit increase in financial leverage leads to -0.406 decrease in discretionary accruals. This finding is consistent with the findings of Hashim and Devi (2007); and Rahman and Ali (2006). However, the result is contrary to the finding of Knechel, Sharma and Sharma (2012); and Saleh and Iskandar (2005) who report financial leverage is positively related to discretionary accruals. The result is consistent in both Model 1 and Model 2.

#### 4.4.1.1.12 Cash Flow and Earnings Management

Cash flow from operations (CFO) has a negatively significant relationship with discretionary accruals, which indicates that the more the CFO increases by one unit, earnings management will reduce by -0.292, as presented in Model 1, Table 4.11 (coefficient value -0.292, *t*-statistics -24.750, p-value 0.000). Researchers have established that where there are good movements of cash flow in the company, there will be fewer earnings management because there is a good sign of performance (Dechow & Dichev, 2002; Hashim & Devi, 2007). The study's outcomes support the notion.

The study's outcomes in Model 2 (coefficient value -0.288, *t*-value -24.840, p-value 0.000) as reported in Table 4.11 show that CFO is associated with discretionary accruals negatively and is significant at the 1% level, meaning that a one unit increase in CFO leads to -0.288 decrease in discretionary accruals. This result supports the previous finding that companies that have

good cash flow from operations have strong indication for not managing earnings (Hashim & Devi, 2007; Sheng Koh, Kelley, & Tong, 2007). The result is consistent in both Models.

#### 4.4.1.1.13 Unprofitable Companies

Unprofitable companies (LOSS) have a negatively significant relationship with discretionary accruals as outlined in Model 1, Table 4.11 (coefficient value -0.008, *t*-statistic -2.760, p-value 0.003). It shows that the more a company incurs one unit loss, earnings management will decrease by -0.008. This justifies that companies with a negative balance do not manage earnings since there is no incentive for managing earnings. The finding supports the assumption that companies with loss are less likely to manage earnings; however, it is inconsistent with the findings of Dechow and Dichev (2002) and Srinidhi and Gul (2006).

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The result in Model 2 shows that loss is negative and significant at the 1% association with discretionary accruals (coefficient value -0.007, *t*-value -2.510, p-value 0.001), showing that a one unit increase in LOSS leads to -0.007 decrease in discretionary accruals. The outcome is in line with the assumption that unprofitable companies do not manage earnings. However, the result contradicts the findings of Lee, Lev and Yeo (2006), Lim and Tan (2010), and Srinidhi and Gul (2006). The result is consistent in both Models.

#### 4.4.1.1.14 Industry and Earnings Management

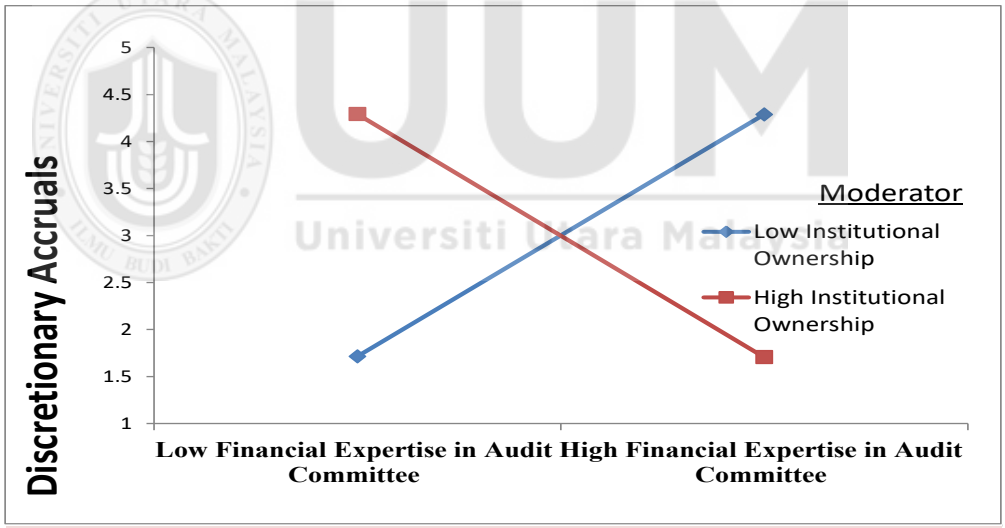
The industry has a positively significant relationship with discretionary accruals. The result in Model 1, Table 4.11 (coefficient value 0.001, *t*-statistics value 2.300, p-value 0.011) shows that healthcare industry has less discretionary accruals than other industries. Based on the sample of this study, the healthcare sector is the industry with the least earnings management.

In Model 2 reveals that the relationship between healthcare sector and discretionary accruals is positive and significant at the 5% level, as it shown in Table 4.11 (coefficient value 0.001, *t*-value 2.120, p-value 0.018). The result is consistent in both Models.

#### 4.4.1.1.15 Moderating Effect of Institutional Ownership on the relationship between Financial Expertise in the Audit Committee and Discretionary Accruals (IO*FEAC)

As established in the literature, there are mixed results on the relationship between financial expertise in the audit committee and discretionary accruals, with the intervention of institutional ownership. This study expects a negative relationship between moderation effect of institutional ownership in audit committee financial expertise and discretionary accruals. The study hypothesizes that institutional ownership moderates the relationship between FEAC and DA, specifically to be stronger (more negative). The result in Table 4.11, Model 2 (coefficient value -0.022, *t*-value -3.750, p-value 0.000)

shows that a one unit increase in interaction of institutional ownership in financial expertise in the audit committee leads to -0.022 decrease in discretionary accruals, testifying that institutional ownership increases the performance of financial expertise significantly at the 1% level in reducing earnings management. The finding also supports the agency theory that institutional ownership can effectively mitigate agency conflicts because the institutional investors' power in the audit committee can encourage and boost the financial experts' power to mitigate earnings management. The effect of the relationship can be seen in Figure 4.2 below.




Institutional Ownership strengthens the negative relationship between Financial Expertise in Audit Committee and Discretionary Accruals.

*Figure 4.2: Moderating Effect of Institutional Ownership on FEAC – DA*

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Institutional ownership moderates the relationship between financial expertise in the audit committee and discretionary accruals. Specifically, the relationship is more negative with the interaction effect of institutional ownership than without interaction effect of institutional ownership. The graph shows both lines of high and low institutional ownership interaction.

#### 4.4.1.1.16 Moderating Effect of Institutional Ownership on the relationship between Audit Committee Independence and Discretionary Accruals (IO*ACIN)

Past literature recognizes the relationship between audit committee independence and discretionary accruals with mixed results. The interaction effect of institutional ownership is expected to enhance the relationship. The study expects a negative relationship between the variables. The study hypothesizes that institutional ownership moderates the relationship between ACIN and DA, specifically to be stronger (more negative).

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The result in Model 2, Table 4.11 (coefficient value -0.016, *t*-value -1.290, p-value 0.099) shows that a one unit increase in institutional ownership interaction in the audit committee independence leads to -0.016 decrease in discretionary accruals and the interacting effect of institutional ownership between ACIN and DA reduces discretionary accruals significantly at the 10% level. The finding also supports the agency theory that institutional ownership mitigates agency problems. The influence of institutional owners encourages and boosts the powers of non-executive directors to significantly

reduce earnings management. This result is clearly shown in Figure 4.3 below.

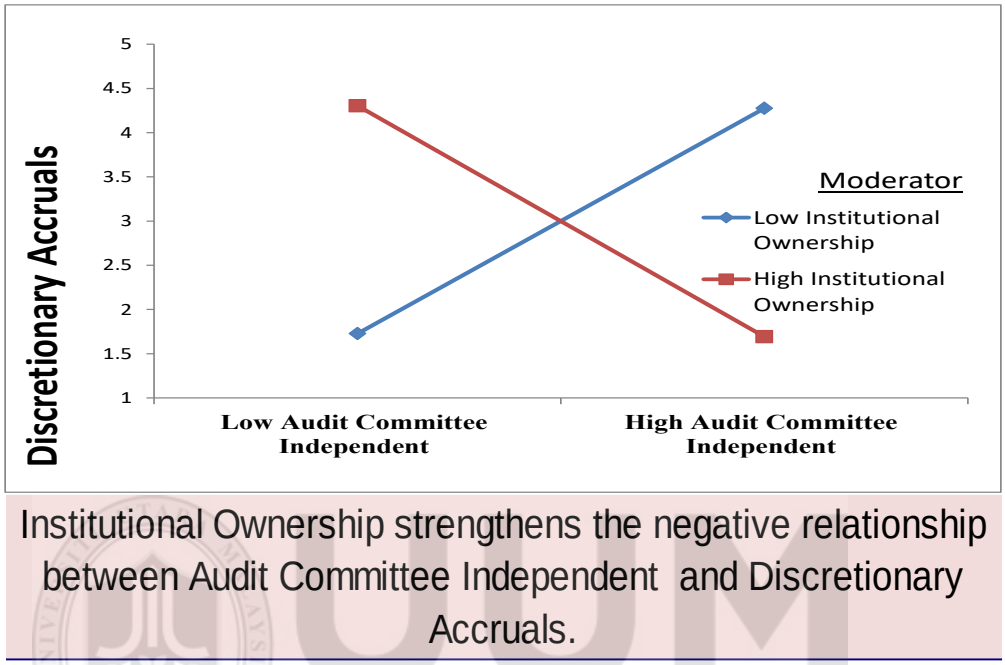


*Figure 4.3: Moderating Effect of Institutional Ownership on ACIN – DA*

Institutional ownership moderates the relationship between audit committee independence and discretionary accruals. Specifically, the relationship becomes more negative with the interaction effect of institutional ownership than without interaction effect of institutional ownership. The graph shows both lines of high and low institutional ownership interaction.

#### 4.5.1.1.17 Moderating Effect of Institutional Ownership on the Relationship between Audit Committee Size and Discretionary Accruals (IO*ACS)

Previous studies have established the relationship between audit committee size and discretionary accruals with mixed results. Intervention of institutional ownership may straighten the relationship and the study expects a negative relationship. The study hypothesizes that institutional ownership moderates the relationship between ACS and DA, specifically to be stronger (more negative). The result in Model 2, Table 4.11 (coefficient -0.001, *t*-value -0.170, p-value 0.432) discloses that a one unit increase in institutional ownership interaction in audit committee size leads to -0.001 decrease in discretionary accruals. It shows that institutional ownership does not moderate the relationship between audit committee size and discretionary accruals at a significant level. The finding does not support the agency theory that institutional ownership mitigates agency conflicts.

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### 4.4.1.2 Interaction Changes

Table 4.12 indicates the effect of changes in the Model 1 as a result of introducing institutional ownership as moderator to moderate the relationship between audit committee (FEAC, ACIN and ACS) and earnings management (DA). The $R^2$ increases from 0.695 to 0.711 due to the moderation effect of institutional ownership in the audit committee. The $R^2$ change is 0.015 and F-statistics change is 6.801, which are significant at the

1% level, informing that moderation affects the Model 2 in reducing earnings management at the 1% level of significance.

**Table 4.12**
***Effect of Interaction Changes for the Moderation***

| Models | R-Square | Adj-$R^2$ | $R^2$ Change | F-change | Sig |
|---|---|---|---|---|---|
| Model One | 0.695 | 0.684 | 0.695 | 63.578 | 0.000 |
| Model Two | 0.711 | 0.698 | 0.015 | 6.801 | 0.000 |

The overall result in Table 4.11, Model 1, shows that corporate governance mechanisms support the agency theory that leads to mitigating agency conflicts in firms. Interaction effect introduced in Model 2 shows the additional robustness of the Model to tackle agency problems as Table 4.12 shows that moderation effect boosts the power of the Model which increases the F-statistics to a 1% significance level, justifying that interaction of institutional investors in Model 2 changes its performance to a better level.

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### 4.5 Robustness Checks Analysis

The study conducted additional robustness test to support the findings of the study. The first test is the pre- and post- Corporate Governance Code 2011 test to test the effectiveness of corporate governance mechanisms in mitigating earnings management. The second test is the test of hierarchical regression which shows the divisional contributions of each group of variables in reducing earnings management. The third test is the test of increasing and decreasing discretionary accruals. The fourth test is the test of other models to detect earnings management. The fifth test is the test of

alternative measurement of one independent variable (audit committee financial expertise).

### 4.5.1 Impact of Corporate Governance Mechanisms in the Pre- and Post-Code 2011

This section shows the analyses of the corporate governance mechanisms effect in the pre- and post-CG Code 2011. The analyses testify that earnings management is higher in the pre-period and less in the post-period due to the effectiveness of the CG Code 2011 in the post-period. The following analyses were carried out to check the consistency of the variables result for the both period. The results in Table 4.13 show the effect of corporate governance in reducing the extent of earnings management in the pre- and post-Corporate Governance Code 2011. The details of the results are indicated in Table 4.7.

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**Table 4.13**
***Regression Result of Pre- and Post-Code 2011 Period***

| | Pre-Code 2011 Period | | | Post-Code 2011 Period | | |
|---|---|---|---|---|---|---|
| **Variables** | **coefficient** | **t-statistics** | **p-value** | **coefficient** | **t-statistic** | **p-value** |
| BOIN | 0.447 | 1.060 | 0.146 | 0.303 | 1.210 | 0.115 |
| CEOD | 0.104 | 0.300 | 0.383 | 0.205 | 0.870 | 0.194 |
| DH | 0.271 | 1.320 | 0.095* | 0.256 | 3.250 | 0.001*** |
| FEAC | 0.260 | 0.780 | 0.219 | -0.014 | -0.070 | 0.473 |
| ACIN | 0.067 | 0.100 | 0.461 | -0.596 | -1.300 | 0.098* |
| ACS | -0.173 | -2.070 | 0.020** | -0.061 | -1.040 | 0.151 |
| CT | -0.151 | -1.100 | 0.136 | 0.095 | 1.480 | 0.070* |
| CP | 0.680 | 3.230 | 0.001*** | -0.059 | -0.590 | 0.280 |
| IO | 0.425 | 1.740 | 0.042** | -0.077 | -0.500 | 0.310 |
| FZ | -7.789 | -2.460 | 0.008*** | 3.755 | 2.050 | 0.021** |
| FL | 6.438 | 3.290 | 0.001*** | -5.140 | -4.530 | 0.000*** |
| CFO | 3.239 | 4.750 | 0.000*** | -7.548 | -13.800 | 0.000*** |
| LOSS | 0.132 | 0.780 | 0.220 | -0.248 | -2.290 | 0.012** |
| INDUSTRY | -0.016 | -0.600 | 0.274 | 0.036 | 2.140 | 0.017** |
| Constant | -4.772 | -2.670 | 0.004*** | 8.024 | 7.840 | 0.000*** |
| R-Squared | | | 0.295 | | | 0.699 |
| Adj. $R^2$ | | | 0.228 | | | 0.670 |
| F-value | | | 4.390*** | | | 24.060*** |
| Sig | | | 0.000 | | | 0.000 |

**N[5] = 162. ***, **, *** is significant at 1, 5 and 10%, respectively.

The results in Table 4.13 show that the $R^2$ of the pre-period is about 30%, while the $R^2$ of the post-period is about 70%, indicating that the Model is stronger to deal with earnings management in the post- CG Code 2011 period. Directors' shareholdings (DH) have a positive and significant relationship with discretionary accruals which is consistent in the both periods. Firm size (FZ), financial leverage (FL) and cash flow (CFO) show a significant relationship with discretionary accruals with different directions

[5]Number of firm year observation is 162 at the pre- CG Code 2011 period and 162 at the post- CG Code 2011 period.

in the pre- or post- CG Code 2011 period. Corporate profit (CP) and institutional ownership (IO) have a positive and significant relationship with discretionary accruals in the pre- period. Audit committee size (ACS) has a negative and significant relationship with discretionary accruals in the pre-period. Corporate tax (CT) and INDUSTRY show a positive and significant relationship with discretionary accruals in the post. Audit committee independent (ACIN) and unprofitable companies (LOSS) show a negative and significant relationship with discretionary accruals in the post- period. In the pre-period, seven variables (directors' shareholdings (DH), audit committee size (ACS), corporate tax (CP), institutional ownership (IO), firm size (FZ), financial leverage (FL) and cash flow (CFO)) are either reducing or increasing earnings management at different significance levels of 1, 5 and 10%.

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Similarly, in the post- CG Code 2011 period, eight variables (directors' shareholding (DH), audit committee independent (ACIN), corporate tax (CT), firm size (FZ), financial leverage (FL), cash flow (CFO), unprofitable companies (LOSS) and INDUSTRY) are positively or negatively associated with earnings management at different significance levels of 1, 5 and 10%. The results justify that the CG Code 2011 mechanisms impact actively on reduce earnings management more than in the pre- CG Code 2003.

This result supports the main result of the study. For example board independence, financial expertise in the audit committee and CEO duality do not significantly reduce earnings management in the main model in Table 4.11. This analysis of the pre and post-code model in Table 4.13 support the previous findings by exhibiting that the same variables do not significantly reduce earnings management, while control variables in the main model in Table 4.11 and Table 4.13 show a significant relationship with earnings management.

### 4.5.2 Analyses of Contribution to the Model

This section analyses the regression of each model of discretionary accruals: independent variables and discretionary accruals, independent, control variables and discretionary accruals; independent, control, moderator variables and discretionary accruals; and lastly, independent, control, moderator, interaction and discretionary accruals, as presented in Table 4.14.

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**Table 4.14**

***General Model Section Analyses***

| | | Model One | | Model Two | | Model Three | | Model Four | |
|---|---|---|---|---|---|---|---|---|---|
| **Variables** | **Sign** | **coefficient** | **t-statistics** | **coefficient** | **t-statistics** | **coefficient** | **t-statistics** | **coefficient** | **t-statistics** |
| Constant | + | 1.073 | 49.490*** | 1.429 | 50.300 | 1.428 | 50.080*** | 1.310 | 23.170*** |
| BOIN | - | -0.009 | -0.790 | 0.008 | 1.160 | 0.008 | 1.170 | 0.013 | 1.910** |
| CEOD | + | 0.013 | 1.300* | 0.005 | 0.920 | 0.005 | 0.940 | 0.008 | 1.390* |
| DH | + | 0.005 | 0.650 | 0.007 | 1.620* | 0.007 | 1.60* | 0.008 | 1.950** |
| FEAC | - | 0.003 | 0.380 | -0.004 | -0.710 | -0.003 | -0.630 | 0.108 | 3.540*** |
| ACIN | - | -0.036 | -1.910** | -0.016 | -1.410* | -0.016 | -1.410* | 0.052 | 0.880 |
| ACS | - | -0.105 | -4.460*** | -0.002 | -1.340* | -0.002 | -1.340* | 0.007 | 0.610 |
| CT | + | 0.009 | 3.020*** | 0.006 | 3.140*** | 0.006 | 3.120*** | 0.006 | 3.160*** |
| CP | - | -0.008 | -2.260** | -0.007 | -2.640*** | -0.007 | -2.620*** | -0.009 | -3.050*** |
| FZ | +/- | | | 0.228 | 4.770*** | 0.228 | 4.770*** | 0.260 | 5.490*** |
| FL | +/- | | | -0.371 | -12.240*** | -0.372 | -12.230*** | -0.406 | -13.100*** |
| CFO | +/- | | | -0.292 | -24.910*** | -0.292 | -24.750*** | -0.288 | -24.840*** |
| LOSS | +/- | | | -0.008 | -2.780*** | -0.008 | -2.750*** | -0.007 | -2.510*** |
| IDUSTRY | +/- | | | 0.001 | 2.330*** | 0.001 | 2.30** | 0.001 | 2.120** |
| IO | - | | | | | -0.001 | -0.240 | -0.003 | -0.670 |
| IOX*FEAC | - | | | | | | | -0.022 | -3.750*** |
| IOX*ACIN | - | | | | | | | -0.016 | -1.290* |
| IOX*ACS | - | | | | | | | 0.000 | -0.170 |
| R-Squared | | | 0.089 | | 0.695 | | 0.695 | | 0.710 |
| Adj. R2 | | | 0.070 | | 0.685 | | 0.684 | | 0.698 |
| F-value | | | 4.810*** | | 68.630*** | | 63.580*** | | 55.890*** |

**, **, * is significant at 1, 5 and 10%, respectively.

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The result of the regression in Model 1 as shown in Table 4.14 reveals the F-statistics of 4.810 which is highly significant at the 1% level. The constant value is positive and highly significant at P<0.000. The Model fitness shows the $R^2$ of 0.089 which means that independent variables (board independent (BOIN), directors' shareholding (DH), CEO duality (CEOD), audit committee size (ACS), financial expertise in audit committee (FEAC), corporate tax (CT) and corporate profit (CP)) explain about 9% of the Model.

Table 4.14, Model 2 shows that F-statistics of 68.630 is positive and significant at the 1% level. The constant value is also positive and significant at P < 0.000. The Model fitness of $R^2$ of 0.695 shows that independent variables (board independent (BOIN), directors' shareholding (DH), CEO duality (CEOD), audit committee size (ACS), financial expertise in audit committee (FEAC), corporate tax (CT) and corporate profit (CP)) and control variables ((firm size (FZ), financial leverage (FL), cash flow (CFO), unprofitable companies (LOSS) and INDUSTRY)) explain about 70% of this Model.

The result in Model 3, Table 4.14 shows the F-statistics of 63.580 which is positive and significant at the 1% level. The constant variable is positive and significant at P<0.000. The $R^2$ which is the model fitness shows the value of 0.695, indicating that the independent variables (board independent (BOIN),

directors' shareholding (DH), CEO duality (CEOD), audit committee size (ACS), financial expertise in audit committee (FEAC), corporate tax (CT) and corporate profit (CP), control variables (firm size (FZ), financial leverage (FL), cash flow (CFO), unprofitable companies (LOSS) and INDUSTRY), moderator institutional ownership (IO) explain about 70% for this Model.

In Model 4, Table 4.14 shows that F-statistics value of 55.890 is positive and significant at the 1% level. The constant value is positive and significant at p <0.000. The model fitness of $R^2$ is 0.710, indicating that the independent variables (board independent (BOIN), directors' shareholding (DH), CEO duality (CEOD), audit committee size (ACS), financial expertise in audit committee (FEAC), corporate tax (CT) and corporate profit (CP), control variables (firm size (FZ), financial leverage (FL), cash flow (CFO), unprofitable companies (LOSS) and INDUSTRY), moderator institutional ownership (IO) and interaction effect institutional ownership in audit committee (IO*FEAC, IO*ACIN and IO*ACS) explain about 71% for this Model.

The models 1 to 4 indicate that the addition of variables (i.e., from Model 1 to Model 4) increases the $R^2$ and makes the Model to be very strong to deal with earnings management. The Model is fitted to control earnings

management, which by extension, supports the agency theory in mitigating opportunistic behaviors of managers.

Seven variables (CT, CP, FZ, FL, CFO, LOSS and INDUSTRY) are consistent in all models. While remaining variables (BOIN, CEOD, DH, FEAC, ACIN and ACS) are differ from one model to another.

### 4.5.3 Discretionary Accruals Direction Analysis

This section presents and discussed the regression result of the positive and negative discretionary accruals separately to differentiate the effect of upward and downward earnings management in the Model. The positive discretionary accruals Model indicates that $R^2$ is 0.403 and F-value is 10.510 which is significant at the 1% level, while the negative discretionary accruals indicate $R^2$ is 0.146 and F-value is 1.880, which is significant at the 5% level.

The result in Table 4.15 shows that managers use upward earnings management (235 companies) more than downward earnings management (170 companies), which is in line with the main aim of the study. Furthermore, it shows that managers achieve their target of earnings management which is similar to the study of Davidson *et al*. (2005). But the result also indicates that at the individual variables level, it seems there is not much difference because most of the variables do not significantly reduce earnings management. This testifies that some managers increase

earnings while some decrease earnings. Table 4.15 presents the results of the two models.

**Table 4.15**
***Directional Discretionary Accruals Analysis***

| | Positive DA | | | Negative DA | | |
|---|---|---|---|---|---|---|
| **Variables** | **coefficient** | **t-statistic** | **p-value** | **coefficient** | **t-statistic** | **p-value** |
| BOIN | -0.093 | -0.550 | 0.292 | 0.515 | 1.120 | 0.133 |
| CEOD | 0.321 | 1.960 | 0.026** | 0.120 | 0.350 | 0.363 |
| DH | 0.013 | 0.220 | 0.415 | 0.230 | 1.410 | 0.080* |
| FEAC | -0.062 | -0.440 | 0.331 | -0.167 | -0.520 | 0.304 |
| ACIN | -0.175 | -0.560 | 0.287 | 0.390 | 0.580 | 0.282 |
| ACS | -0.084 | -2.340 | 0.010** | -0.043 | -0.510 | 0.304 |
| CT | 0.034 | 0.620 | 0.269 | -0.403 | -3.790 | 0.000*** |
| CP | 0.004 | 0.050 | 0.480 | 0.399 | 2.350 | 0.010** |
| IO | -0.045 | -0.440 | 0.332 | -0.086 | -0.360 | 0.360 |
| FZ | -0.011 | -0.130 | 0.447 | 0.392 | 1.510 | 0.067* |
| FL | -0.095 | -6.380 | 0.000*** | 0.050 | 0.180 | 0.429 |
| CFO | 0.187 | 4.210 | 0.000*** | -0.051 | -0.490 | 0.312 |
| LOSS | -0.069 | -0.950 | 0.173 | -0.063 | -0.390 | 0.351 |
| IDUSTRY | 0.166 | 1.250 | 0.106 | 0.067 | 2.300 | 0.012** |
| $R^2$ | | | 0.403 | | | 0.146 |
| F-value | | | 10.510*** | | | 1.880** |
| Sig | | | 0.000 | | | 0.033 |

**N[6] ***, **, *** is significant at 1, 5 and 10 percent respectively.

The Model with positive discretionary in Table 4.15 discloses that increase in audit committee size (ACS) and financial leverage (FL) significantly reduce earnings management; while CEO duality (CEOD) and cash flow (CFO) increase also increase earnings management. The model with negative discretionary accrual shows that increase in directors' shareholding

[6]Firm year observation for negative discretionary accruals model is 170 and for positive discretionary accruals model is 235.

(DH), corporate profit (CP), firm size (FZ) and INDUSTRY significantly increase earnings management, while corporate tax (CT) significantly reduce earnings management.

### 4.5.4 Additional Test of Different Earnings Management Models

Table 4.16 presents the alternative findings of detecting earnings management using additional two Models of Dechow and Dichev (2002); and Francis, LaFond, Olsson and Schipper (2005) and compared to the Modified Jones Model (1995). The Dechow and Dichev (2002) Model result shows that $R^2$ is 45% and the F-value is 22.590, which is significant at the 1% value. The Francis *et al.* (2005) model result shows that $R^2$ is 54% and the F-value is 31.930, which is significant at the 1% level. Both Models are not up to the quality of the Modified Jones Model that has $R^2$ of 70% and F-value of 63.580, which is significant at the 1% level. This result indicates that the Modified Jones Model is fit for this study. The study uses the absolute discretionary accruals as the proxy for earnings management to compare the three Models' effects. The results of the three models are presented in table 4.16.

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**Table 4.16**

***Comparison of Different Models Effects***

| | | Dechow and Dichev (2002) | | | Francis et al. (2005) | | | Modified Jones (1995) | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Variables** | **Sign** | **coefficient** | **t-statistic** | **p-value** | **coefficient** | **t-statistic** | **p-value** | **coefficient** | **t-statistic** | **p-value** |
| BOIN | - | -0.210 | 1.130 | 0.130 | 0.039 | 0.240 | 0.407 | 0.008 | 1.170 | 0.121 |
| CEOD | + | 0.014 | 0.090 | 0.465 | -0.378 | -2.770 | 0.003*** | 0.005 | 0.940 | 0.175 |
| DH | + | 0.050 | 0.740 | 0.230 | -0.007 | -0.110 | 0.455 | 0.007 | 1.600 | 0.056* |
| FEAC | - | 0.160 | 1.100 | 0.137 | -0.051 | -0.400 | 0.344 | -0.003 | -0.630 | 0.266 |
| ACIN | - | 0.392 | 1.280 | 0.101 | 0.223 | 0.830 | 0.203 | -0.016 | -1.410 | 0.080* |
| ACS | - | 0.022 | 0.590 | 0.279 | -0.047 | -1.420 | 0.078* | -0.002 | -1.340 | 0.091* |
| CT | + | -0.035 | -0.680 | 0.249 | -0.027 | -0.590 | 0.279 | 0.006 | 3.120 | 0.001*** |
| CP | - | 0.193 | 2.400 | 0.009*** | 0.253 | 3.530 | 0.000*** | -0.007 | -2.620 | 0.005*** |
| IO | - | 0.222 | 2.060 | 0.020** | 0.170 | 1.790 | 0.037** | -0.001 | -0.240 | 0.406 |
| FZ | +/- | 0.463 | 4.970 | 0.000*** | 0.499 | 6.080 | 0.000*** | 0.228 | 4.770 | 0.000*** |
| FL | +/- | 0.006 | 0.320 | 0.374 | 0.072 | 4.160 | 0.000*** | -0.372 | -12.230 | 0.000*** |
| CFO | +/- | 0.049 | 1.060 | 0.144 | 0.033 | 0.800 | 0.212 | -0.292 | -24.750 | 0.000*** |
| LOSS | +/- | 0.175 | 2.330 | 0.010** | 0.258 | 3.930 | 0.000*** | -0.008 | -2.750 | 0.003*** |
| IDUSTRY | +/- | -0.023 | -1.960 | 0.025** | -0.176 | -1.710 | 0.045** | 0.001 | 2.300 | 0.011** |
| Constant | +/- | -5.837 | -13.550 | 0.000*** | -5.710 | -14.690 | 0.000*** | 1.428 | 50.080 | 0.000*** |
| $R^2$ | | | 0.450 | | | 0.536 | | | 0.695 | |
| Adj. $R^2$ | | | 0.430 | | | 0.519 | | | 0.684 | |
| F-value | | | 22.590*** | | | 31.930*** | | | 63.580*** | |
| Sig | | | 0.000 | | | 0.000 | | | 0.000 | |

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*****, **,*** is significant at 1, 5 and 10%, respectively. Note: Francis et al. (2005) measure discretionary accruals as the residuals $TCA_t = \alpha + \beta_1 CFO_{t-1} + \beta_2 CFO_t + \beta_3 CFO_{t+1} + \beta_4 \Delta REV + \beta_5 PPE + \mu_t$. Where: $TCA_t$ is the total current accruals, $CFO_{t-1}$ is the cash flow from operations in year t-1, $CFO_t$ is the cash flow from operations in year t, $CFO_{t+1}$ is the cash flow from operations in year t+1, ΔREV is the change in revenue and PPE is the plant property and equipment. Dechow and Dichev (2002) measure discretionary accruals as the residuals of $\Delta WCC = \alpha + \beta_1 CFO_{t-1} + \beta_2 CFO_t + \beta_3 CFO_{t+1} + \mu_t$. Where: ΔWCC is the change in working capital.

Furthermore, the individual variables in the Models show that corporate profit and institutional ownership variables are significant in the Dechow and Dichev (2002) Model irrespective of the directions, while CEO duality, audit committee size, corporate profit and institutional ownership variables are significant in the Francis *et al.* (2005) Model irrespective of the direction. Directors' shareholdings, audit committee independence, audit committee size, corporate tax and corporate profit are significant irrespective of the direction in the Modified Jones Model (1995). The control variables section shows the result to be almost the same in all Models. This simply justifies that the Modified Jones Model (1995) is better than the other two Models compared to control earnings management based on the study sample.

Firm size (FZ) is positive and significant consistently on all models while, corporate profit (CP), unprofitable (LOSS) and INDUSTRY are significant and consistently in all models irrespective of the direction. Other variables (board independent (BOIN), CEO duality (CEOD), directors shareholdings (DH), financial expertise in audit committee (FEAC), audit committee independent (ACIN), audit committee size (ACS), corporate tax (CT), institutional ownership (IO), financial leverage (FL) and cash flow (CFO)) are not consistent in the models.

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### 4.5.5 Analyses of Alternative Measurement of the Variable

Table 4.17 presents the result of the alternative measurement of financial expertise in the audit committee, which is measured using dummy variable "1", meaning there is at least a director with financial qualification (Diploma or Degree or Masters or professional qualification e.t.c.) in audit committee, and "0" otherwise. The result (coefficient 0.005, t-statistics 0.700, p-value 0.241) shows that there is no improvement for measuring financial expertise with financial qualification based on the sample of this study because the previous result in Model 1, Table 4.11 (coefficient value -0.003, *t*-statistic value -0.630, p-value 0.266) indicates a negatively insignificant relationship while the present result shows a positively insignificant relationship. Both measurements are not effective in mitigating earnings management.

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**Table 4.17**

***Alternative Measurement Result***

| Variables | Sign | coefficient | t-statistic | p-value |
|---|---|---|---|---|
| BOIN | - | 0.007 | 1.090 | 0.139 |
| CEOD | + | 0.005 | 0.940 | 0.175 |
| DH | + | 0.007 | 1.660 | 0.050** |
| ALTFEAC* | - | 0.005 | 0.700 | 0.241 |
| ACIN | - | -0.016 | -1.410 | 0.080* |
| ACS | - | -0.002 | -1.280 | 0.101 |
| CT | + | 0.006 | 3.160 | 0.001*** |
| CP | - | -0.007 | -2.610 | 0.005*** |
| IO | - | -0.002 | -0.500 | 0.310 |
| FZ | + | 0.224 | 4.710 | 0.000*** |
| FL | - | -0.372 | -12.230 | 0.000*** |
| CFO | - | -0.293 | -24.590 | 0.000*** |
| LOSS | - | -0.007 | -2.670 | 0.004*** |
| IDUSTRY | - | 0.001 | 2.340 | 0.010** |
| Constant | +/- | 1.420 | 46.890 | 0.000*** |
| R-square | | | 0.695 | |
| F-value | | | 63.600*** | |
| Sig | | | 0.000 | |

**N = 405.** ***, **, * is significant at 1, 5 and 10%, respectively. ALTFEAC is the alternative variable measurement for financial expertise in the audit committee using dummy "1" - there is a director with financial qualification, and "0" otherwise.

### 4.5.6 Effect of Industry Type

Sector analyses are conducted in order to investigate the potential issues of whether this study's findings will change based on the industry type. It is indicated in section 3.4.8.5 that firms operating in the healthcare sector have the lowest level of discretionary accruals. The industry is measured using a dummy variable that takes the value of "1", if the company is classified under healthcare industry, and "0" otherwise.

The study used the following multiple regression model to determine the extent of the influence of each industry variable in the study on discretionary accruals.

$$DA_{it} = \beta_o + \beta_1(BOIN)_{it} + \beta_2(CEOD)_{it} + \beta_3(DH)_{it} + \beta_4(FEAC)_{it} + \beta_5(ACIN)_{it} + \beta_6(ACS)_{it} + \beta_7(CT)_{it} + \beta_8(CP)_{it} + \beta_9(IO)_{it} + \beta_{10}(FZ)_{it} + \beta_{11}(FL)_{it} + \beta_{12}(CFO)_{it} + \beta_{13}(LOSS)_{it} + \beta_{14}(INDUSTRY\_agr)_{it} + \beta_{15}(INDUSTRY\_cog)_{it} + \beta_{16}(INDUSTRY\_ce)_{it} + \beta_{17}(INDUSTRY\_cg)_{it} + \beta_{18}(INDUSTRY\_ict)_{it} + \beta_{19}(INDUSTRY\_ig)_{it} + \beta_{20}(INDUSTRY\_ng)_{it} + \beta_{21}(INDUSTRY\_og)_{it} + \beta_{22}(INDUSTRY\_serv)_{it} + \mu_{it} \quad \text{.....(3)}$$

Where:

IDUSTRY_agr is the agriculture industry, IDUSTRY_cog is the conglomerate industry, IDUSTRY_ce is construction and estate industry, IDUSTRY_cg is the consumer goods industry, IDUSTRY_ict is the information technology industry, IDUSTRY_ig is the industrial goods, IDUSTRY_ng is the natural resources, IDUSTRY_og is the oil and gas industry and IDUSTRY_serv is the services industry.

The result of the Model 3 in Table 4.17 indicated that $R^2$ is 71 percent and F statistic is 41.400 which is significant at 1 percent level. The result shows that only two industries (industrial goods sector and oil and gas sector) are positive and significantly related to the discretionary accruals. The result shows that healthcare, industrial goods and oil and gas have the positive and significant relationship with discretionary accruals thus, all the others seven

industries have no significant relationship with discretionary accruals. Similarly, all the individual variables results have not changed which signified that industry type has no influence on the outcome of the present study. The model results are shown in Table 4.18.

**Table 4.18**
***General Model With Industry Effect***

| Variables | Sign | coefficient | t-statistics | p-value |
|---|---|---|---|---|
| BOIN | - | 0.001 | 1.780 | 0.380 |
| CEOD | + | 0.006 | 0.970 | 0.167 |
| DH | + | 0.007 | 1.430 | 0.077 |
| FEAC | - | -0.005 | -0.960 | 0.170 |
| ACIN | - | -0.019 | -1.630 | 0.052 |
| ACS | - | -0.002 | -1.420 | 0.079 |
| CT | - | 0.006 | 2.830 | 0.003 |
| CP | - | 0.007 | -2.260 | 0.012 |
| IO | - | 0.001 | 0.180 | 0.429 |
| FZ | + | -0.253 | 4.910 | 0.000 |
| FL | - | -0.371 | -11.690 | 0.000 |
| CFO | - | -0.290 | -24.180 | 0.000 |
| LOSS | - | -0.009 | -3.180 | 0.001 |
| IDUSTRY_agr | - | 0.003 | 1.840 | 0.165 |
| IDUSTRY_cog | - | -0.002 | -1.220 | 0.111 |
| IDUSTRY_ce | - | -0.001 | -1.230 | 0.409 |
| IDUSTRY_cg | - | -0.002 | -0.620 | 0.270 |
| IDUSTRY_ict | - | 0.001 | 0.160 | 0.437 |
| IDUSTRY_ig | - | 0.003 | 2.010 | 0.023 |
| IDUSTRY_ng | - | 0.003 | -1.430 | 0.116 |
| IDUSTRY_og | - | 0.002 | 1.200 | 0.076 |
| IDUSTRY_serv | - | 0.001 | 0.800 | 0.213 |
| Constant | + | 1.401 | 42.570 | 0.000 |
| R-Squared | | | 0.705 | |
| Adjusted R2 | | | 0.688 | |
| F-value | | | 41.400 | |
| Sig | | | 0.000 | |

**N = 405. ***, **, *** is significant at 1, 5 and 10 percent respectively.

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## 4.6 Summary

This chapter starts with the introduction and description of the study population and sample size drawn from the population. The study further provides descriptive statistics of the Modified Jones Model (1995) to detect earnings management, descriptive statistics of the variables which consist of continuous and non-continuous variables and descriptive statistics of discretionary accruals based on industry as classified by the Nigerian SEC.

The study presents univariate analyses where pre- and post-code discretionary accruals analyses, analyses of higher and low discretionary accruals and correlation matrix analyses, are presented. Multicollinearity, Heteroskedasticity, skewness, kurtosis and linearity examinations for the study variables are presented. Result and the analyses of the findings are discussed in the chapter, where directors' shareholding, audit committee independence, audit committee size, corporate profit, moderation effect of institutional ownership on financial expertise in the audit committee and moderation effect of institutional ownership on audit committee independence are supported in the study. Board independence, CEO duality, financial expertise in the audit committee, corporate tax and moderation effect of institutional ownership on audit committee size are not supported in the study.

Finally, additional analyses were carried out for the earnings management detecting models, pre- and post-code extent of earnings management,

analyses of contributions of groups in the study model, analyses of the alternative variable measurements and analyses of different industry effects. Finally, a summary of the chapter is given.

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# CHAPTER FIVE

## DISCUSSION AND CONCLUSION

### 5.1 Introduction

This chapter provides the following sections: summary of the research results; limitations of the research; implications of the study; future research avenues; and conclusion of the study. The chapter also highlights and discusses the effect of corporate governance (board of directors' characteristics, audit committee characteristics, firm characteristics and the moderating effect of institutional ownership) on earnings management activities in Nigeria using the quoted firms' data. DISCUSSION

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### 5.2 An Overview of the Research Issues

Managers use earnings management to increase or decrease the reported earnings which result in lower quality of accounting numbers. This leads to wrong decisions taken by investors as a result of misrepresentation of the true earnings. In the long-run, this can erode the investors' confidence. The Corporate Governance Code was introduced as a mechanism to control the managers' opportunistic behavior. For example, the SEC Code 2003 was put in place in 2003 and later replaced with another Code in 2011 to ensure a safe and healthy business environment and to restore confidence of the investors. Dechow *et al.* (1996) are is the view that when the monitoring system is put in place, accounting numbers will be reliable and have higher quality.

The purpose of this study is to investigate how corporate governance mechanisms (board of directors and audit committee characteristics) and firm characteristics influence earnings management activities in Nigeria using data from non-financial listed firms. The study reviewed extensively the previous findings on how board mechanisms, audit committee mechanisms and firm characteristics can control the management in manipulating earnings. The contributions of this study, besides extending the literature, show the moderating effect of institutional ownership in enhancing audit committee effectiveness to control management's opportunistic behavior; show the effectiveness of firm characteristics in controlling earnings management; and finally, provide a new measurement for corporate profit and corporate tax.

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**5.3 Summary of the Research Findings**

In line with the agency theory, political cost theory, ethical theory and other empirical studies, the present study examined and tested individual variables and answered the research questions raised using T-test and multiple regression analyses. Directional hypotheses were formulated for the individual variables, from the board of directors' mechanisms, audit committee mechanisms, firm characteristics and institutional ownership as a moderating variable in the study, to find their effect in reducing earnings management. The overall result indicates that the explanatory variables correctly explain the model at a significant level. The individual variables are explained below:

The study aims to investigate the extent of earnings management in the pre- and post-code 2011 periods. Based on the t-test analysis, the result indicates that the post-code 2011 period has significantly less earnings management compared to the pre-code period. This somehow indicates that the revised corporate governance code 2011 mechanisms have impacted actively in reducing earnings management, which in turn, have reduced agency cost; this finding supports the study.

Directors' shareholdings indicate a positive and significant relationship which shows that an increase in directors' ownership leads to high earnings management. The study result justifies the assumption of the study that any increase in directors' ownership leads to increase in earnings management. It indicates that directors' ownership should be reduced, which can lead to a decrease in the expropriation of company assets and less agency cost to the firm due to their actions. The finding is consistent with the finding of Cheng and Warfield (2005).

Audit committee independence shows a negatively significant relationship with earnings management as expected by the study. It indicates that any increase in audit committee independence will lead to a decrease in earnings management. It indicates that adding and removing independent directors in the audit committee will change the level of managers' opportunistic

behavior. The role of non-executive directors in audit committee is to provide independent judgment (SEC Code, 2011) which can lead to low agency cost of the firms. The finding supports Piot and Janin (2007).

The study expected a negative relationship between audit committee size and earnings management. The study finds that audit committee size has a negatively significant relationship with earnings management, indicating that any increase in audit committee size leads to a decrease in earnings management. It shows that when the audit committee is large, there will be a division of labor which leads to efficiency and reduction of agency problems. The finding supports the findings of and Fodio *et al.* (2013) and Kent *et al.* (2010), that argued that size of the audit committee plays a vital role in curbing earnings management.

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Corporate tax indicates a positively significant relationship with earnings management as expected in the study. It indicates that the amount of tax paid by the organization will discourage managers from managing discretionary accruals that lead to decreasing agency cost. This supports the assumption of the study that corporations pay more tax as a result of discretionary accruals manipulation.

Corporate profit shows a negatively significant association as predicted in the study. It signifies that any increase in corporate profit leads to decrease

in earnings management. This finding supports the assumption of the study that any increase in corporate profit leads to a decrease in discretionary accruals because the more managers use discretionary accruals to report the higher profits, shareholders will ask for higher dividend. This may discourage managers from using earnings management to report higher profit and to avoid agency cost.

Interacting effects of institutional ownership between financial expertise in audit committee and earnings management indicate a negative and significant relationship, as expected by the study. It shows that moderating effect of IO impacts negatively and significantly in reducing earnings management. The institutional investors' power to control irregularity through their representation, will encourage and boost the financial experts' ability to mitigate earnings management more than firms that have no institutional interaction effect. The present study justifies that inclusion of institutional owners in the audit committee can lead to a decrease in managers' opportunistic behavior, and subsequently, decrease in agency cost.

The moderating effect of institutional ownership between audit committee independence and earnings management is negative and significant as assumed by the study. It justifies that institutional ownership's role in controlling earnings manipulations boosts independent directors'

performance in decreasing earnings management more than the firms that have no institutional ownership representation. This finding supports the assumption of the study which states that institutional ownership moderates the relationship between audit committee independence and earnings management, specifically to be more negative in reducing earnings management, that in turn, leads to decrease in agency cost of the firm.

For board independence, the study expected a negative relationship; however, the findings show a positive relationship with earnings management but it is not significant, which does not support the prediction of the study. This may be due to independent directors being controlled by the management in one way or the other which has led to the loss of their control of managers, giving managers a chance to manipulate accounting numbers; this, in turn, leads to agency cost for the firm. This finding supports the findings of Abdullah and Nasir (2004) and Rahman and Ali (2006).

The CEO having a dual role has a relationship with discretionary accruals which is not significant and does not support the prediction of the study that separating CEO and board chairman positions can reduce earnings management, which is in line with the finding of Klein (2002b).

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The study predicted a negative relationship between financial expertise in audit committee and earnings management. The audit committee financial expertise has a negative relationship with earnings management but it is not significant. The finding does not support the assumption of the study. So one year or more years of directors in audit committee is not enough to prevent managers from manipulation of accounting numbers because they may not understand some hidden information that does not consistently happen. Experience should be an addition to the basic qualification in order to effectively decrease agency cost.

The moderating effect of institutional ownership on the relationship between audit committee size and earnings management was expected to be negative and significant, but the finding is not significant, which is contrary to the expectation of the study. Many directors in the audit committee associated with the power of institutional ownership to control unlawful activities of managers will not curbs earnings management more than the firms that have no institutional representation in the company. The finding is contrary, justifying that institutional role, in relation to the audit committee size, is meaningless due to the insignificance of the interaction. The summary of the study findings are presented in Table 5.1.

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**Table 5.1**

***Results Summary of the Tested Hypotheses***

| | Hypothesis | Sign | Findings | Decisions |
|---|---|---|---|---|
| H1 | There is a negative relationship between board independence and discretionary accruals. | - | Positive not significance | Not supported |
| H2 | There is a positive relationship between CEO duality and discretionary accruals. | + | Positive not significance | Not Supported |
| H3 | There is a positive relationship between directors' shareholdings and discretionary accruals. | + | Positive significance | Supported |
| H4 | There is a negative relationship between financial expertise in audit committees and discretionary accruals. | - | Negative not significance | Not Supported |
| H5 | There is a negative relationship between audit committee independent and discretionary accruals. | - | Negative significance | Supported |
| H6 | There is a negative relationship between audit committee size and discretionary accruals. | - | Negative significance | Supported |
| H7 | There is a positive relationship between corporate tax and discretionary accruals. | + | Positive significance | Supported |
| H8 | There is a negative relationship between corporate profit and discretionary accruals. | - | Negative significance | Supported |
| H9 | Institutional shareholding moderates the relationship between financial expertise in audit committees and discretionary accruals, specifically to be stronger (more negative) | - | Negative significance | Supported |
| H10 | Institutional shareholding moderates the relationship between audit committee independence and discretionary accruals, specifically to be stronger (more negative) | - | Negative significance | Supported |
| H11 | Institutional shareholding moderates the relationship between audit committee size and discretionary accruals, specifically to be stronger (more negative) | - | Negative not significance | Not supported |

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## 5.4 Research Implications and Recommendations

This study contributes to the extension of the literature on the agency theory, political cost theory and ethical theory, with respect to the board of directors' characteristics (board independence, CEO duality and directors' shareholding); audit committee characteristics (financial expertise in the audit committee, audit committee independence and audit committee size); firm characteristics (corporate tax and corporate profit); and moderation of

institutional ownership, which are tested for reducing earnings management. The study concludes that interacting effect of institutional ownership in audit committee, corporate tax, corporate profit, absence of CEO duality and lesser directors' shareholding are valuable in mitigating earnings management.

### 5.4.1 Theoretical Implication

Many studies have been conducted on corporate governance and earnings management in developed and developing countries using the agency theory. The present study's findings contribute to the extension of the agency theory by examining the role of corporate governance mechanisms, firm characteristics and the moderating effect of institutional ownership in audit committee in mitigating agency conflicts between shareholders and managers.

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The present empirical findings also disclose that directors' shareholdings, audit committee mechanisms (audit committee independence and audit committee size), firm characteristics (corporate profit and corporate tax) and moderation (interaction effect of institutional ownership in financial expertise in audit committee and interaction effect of institutional ownership in audit committee independent) play a vital role in mitigating agency problems by significantly reducing earnings management.

The significant relationship between directors' shareholdings and earnings management indicates that reducing directors' shareholding will reduce earnings management which supports the agency theory. The result indicates that audit committee independence significantly decreases earnings management. It shows that any increase in audit committee independence will lead to the decrease in earnings management, which also decreases agency cost of the firm. The relationship between audit committee size and earnings management is negative and significant, which indicates that audit committee size contributes to reducing agency cost of the company.

In terms of the political cost theory that explained government action of taxing company income, the present study's finding show that companies manage earnings and pay higher tax out of the shareholders' fund. The study finds a positive and significant association between corporate tax and earnings management. There is the need for researchers to explore more theories that will give more support to this situation.

The findings of the present study, based on the sample of listed companies in Nigeria, find corporate profit to significantly constrain agency conflict, which supports the ethical theory that managers report original earnings ethically which has a negative and significant association with earnings management. This can lead to the quality of the financial report.

However, as for financial experts in the audit committee using their skills to prevent illegal activities, the present study finds a weak relationship. This result has less support for the agency theory provisions of the board being able to mitigate agency conflict effectively, although this find is supported by other findings, like Menon and Williams (2004).

The intervention of the institutional investors in the role of the audit committee shows that audit committee can effectively mitigate agency conflict in the listed companies. The agency theory that links the action of institutional investors toward preventing managers' opportunistic actions is supported by the finding that interaction effect of institutional ownership in financial expertise in audit committee and interaction effect of institutional ownership in audit committee independent significantly reduces earnings management which leads to a decrease in agency cost of the company.

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### 5.4.2 Policy Implications

The findings of the present study show that corporate governance mechanisms and firm characteristics play vital roles in mitigating earnings management. The present study is beneficial to shareholders, regulators, researchers and other concerned bodies, in that it gives more ideas and ways to enhance the quality of earnings and reducing opportunistic behavior of managers. The Government, through regulatory bodies, should consider the findings (encouraging institutional investors' participation, reducing directors' ownership, providing an enabling environment for firms to make a

profit and more corporate tax measures) of this study in future policy formulation and revise some of the existing regulations. For example, it is recommended that the corporate governance code undergoes periodic review to incorporate new policies and also drop outdated policies for better investments in the country.

It shows clear evidence of the benefits that can be derived with the participation of institutional ownership representation in the company. Institutional owners' representation in the company can regulate manipulation of accounting numbers. The Nigerian government should consider the findings of this study to make more regulations in terms of ownership, i.e., to encourage participation of institutional owners in the companies; this will help in regulating irregularities in the process of reporting accounting numbers, as the findings of the present study justify that institutional investors contribute to making the audit committee more functional in regulating earnings manipulation.

Regulatory bodies should also provide other ways that will make the board be really independent, so as to function well in mitigating opportunistic behavior of managers. This is because the findings of the present study, including the additional analysis, justify that board independence in the Nigerian context (based on the study sample) does not contribute to mitigating earnings management. As such, a new policy needs to be

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introduced in terms of additional ratio and participation of independent directors apart from non-executive directors on the board, which is applicable in other countries.

Similarly, the regulators need to make a policy on the directors' ownership in the listed companies in Nigeria. The present study's finding justify that directors' ownership leads to significant earnings management increase; as such, a new policy is needed to regulate the number of shares (maximum) acquired by the directors on the board to limit the directors' role in encouraging earnings management in public listed companies.

The regulators should also revise the requirement for financial expertise in the audit committee because the findings of the present study, including the additional analysis, justify that financial experience and accounting or financial knowledge per se is not enough to mitigate earnings management in the audit committee. Regulators need to require more members with professional qualification in the audit committee that will then enhance the sophistication of the committee to mitigate opportunistic activities in the companies. Professional associations trained their members with latest information, technicalities and technologies periodically in order to be sophisticated professionals that will help them to trace manipulations more than those that are not professionals.

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Regulators should provide policies for firm characteristics, such as corporate tax and corporate profit, that can be used as a signal to the authority, investors and other stakeholders that managers use opportunistic behavior in the reported earnings; the present findings indicate that corporate tax has a positive association with earnings management and corporate profit has a negative association with earnings management, where higher tax or higher profits are reported, there is need for extra verification for the corporate earnings.

The present study also provides shareholders, investors, regulators and the general public with valuable information that will enrich their knowledge and help for better understanding of the corporate governance and earnings management practices in their corporations. This, in turn, can enhance the quality of reported accounting numbers. Similarly, the findings of this study also enlighten the stakeholders about an opportunistic behavior of managers and the roles played by the corporate governance mechanisms in regulating such behaviors.

### 5.5 Limitation of the Study

The overall study is in line with the agency theory that predicts the relationship between corporate governance, firm characteristics and earnings management. The limitations of this study can be categorized into three sections: (1) unavailability of companies' data because companies are not filing returns in time according to SEC 2015 report. Out of 137 non-

financial firms quoted on the Nigerian Stock Exchange, only 81 firms' data could be collected and used for the study and to make a generalization of the findings. Future research may also consider this shortcoming; (2) constructs and variables shortcomings - discretionary accruals was used as proxy of earnings management as suggested by previous studies, but there is no one standard method of measuring earnings management; this study employed cross-sectional Modified Jones Model (1995) to calculate the discretionary accruals based on industry and year. Other researchers may use other measurements to see if they can arrive at the same results as this study; and (3) Institutional ownership, as moderator, moderates only audit committee mechanisms; it does not examine moderation effect for the board mechanisms and this is left for future research. The study uses only a few mechanisms of the board and audit committee, and the remaining constructs are not captured due to unavailability of data and other relevant issues, which future studies may consider. The study uses corporate tax and corporate profit as firm characteristics; future research should consider other firm characteristics (such as dividend and corporate social responsibility) to test their impact on earnings management.

Although the above limitations are observed, it does not reduce the value of this research, as the study has followed rigorous processes and meets the targeted objectives, which make it a useful and valid research document.

## 5.6 Further Research Avenues

The present study emphasizes more on the moderating effect of institutional ownership in the relationship between audit committee characteristics and earnings management. Other studies may look at the effects of other forms of ownership on the board and audit committee characteristics. Among the other avenues are to employ multi-nation data to determine the best model to detect earnings management (discretionary accruals) (Stubben, 2010); or real earnings management (Cohen & Zarowin, 2010), and the best method to mitigate earnings management.

Future research should consider employing more data which are not available in the present study, especially the current years 2014 and 2015 financial reports, to further test for the post- code 2011 period - whether there is consistency in improving the quality of accounting numbers. Similarly, other corporate governance variables and measurements should be considered for the post-code 2011 period to find out whether there has been the significant improvement in the revised code.

## 5.7 Conclusion

The present study examines how the board of directors' mechanisms, audit committee mechanisms, firm characteristics and institutional ownership moderation of the audit committee, mitigate earnings management. The expectations of the study are based on the agency theory, political cost theory, ethical theory, monitoring mechanisms of the board of directors,

audit committee characteristics, firm characteristics and interaction effect of institutional ownership. One research question was answered and eleven hypotheses were tested to find out the expected roles of moderating effect; and corporate governance mechanisms and firm characteristics in mitigating earnings management. The answer to the research question supported the study. Out of the tested hypotheses, seven support the research assumptions and four do not support the research assumptions.

The study concludes that corporate governance mechanisms constrain earnings management in the listed companies in Nigeria; the Corporate Governance Code 2011 regulates manipulation activities in the post-code period better than the pre-code period, and institutional shareholders' participation in the organizations have a great impact in constraining earnings management.

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The study establishes that lower directors' shareholding has a significant impact in curbing earnings management but the study fails to establish a significant impact of board independence and separation of CEO and chairman of the board positions in reducing earnings management.

Similarly, audit committee independence and audit committee size make a significant contribution in reducing earnings management; and financial expertise in the audit committee fails to contribute significantly to curbing

earnings management. The outcome of the study indicates that interaction effect of institutional owners has a significant effect on the audit committee (financial expertise in the audit committee and audit committee independence) to minimize discretionary accruals manipulation due to their power in the committee, but no significant effect of institutional ownership is found on the audit committee size.

Furthermore, the study justifies that firm characteristics (corporate profit and corporate tax) significantly contribute to mitigating irregularities or reducing discretionary accruals manipulation, concluding that where corporations report higher corporate profit, there is lower discretionary accruals or lower opportunistic behavior.

The study recommends to the board of directors and regulators on the importance of having institutional ownership participation would empower the audit committee to mitigate irregularities in the financial reporting process. The study hopes that the board of directors and regulators will consider including institutional ownership in the organizational constitution.

Similarly, results on effect of corporate profit on earnings management, show to the board of directors and regulators that they need to find ways (through research, innovations, training and policies that will guide firms on profit maximization e.t.c) to encourage corporations to embark on profitable

businesses so as to make more profit in order to reduce the level of discretionary accruals manipulation in the organizations.

Interaction of other forms of ownership, such as foreign ownership, family ownership, minority ownership and government ownership, need to be tested to find out if they have something to contribute to mitigating earnings management. This study limits its moderation effect to the audit committee only; there is a need to extend moderation effect to other characteristics of the board to investigate their impact in mitigating earnings management as well. Earnings management also needs to be further investigated to come up with more sophisticated ways to detect earnings management.

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# Appendix A

## Extra Analyses Tables

Contribution of individual variables (corporate tax and firm size) that are highly correlated

**Table 1**
**General Model 1**

| | | Complete Model | | Absence of CT | | Absence of FL | |
|---|---|---|---|---|---|---|---|
| **Variables** | **Sign** | **coefficient** | **t-statistics** | **coefficient** | **t-statistic** | **coefficient** | **t-statistic** |
| BOIN | - | 0.008 | 1.170 | 0.010 | 1.470 | 0.006 | 0.860 |
| CEOD | + | 0.005 | 0.940 | 0.007 | 1.160 | 0.005 | 0.900 |
| DH | + | 0.007 | 1.600 | 0.005 | 1.150 | 0.010 | 2.190 |
| FEAC | - | -0.003 | -0.630 | -0.004 | -0.780 | -0.001 | -0.200 |
| ACIN | - | -0.016 | -1.410 | -0.017 | -1.470 | -0.016 | -1.330 |
| ACS | - | -0.002 | -1.340 | -0.002 | -1.200 | -0.001 | -0.620 |
| CT | - | 0.006 | 3.120 | | | 0.008 | 4.180 |
| CP | - | -0.007 | -2.620 | -0.004 | -1.420 | 0.001 | 0.370 |
| IO | - | -0.001 | -0.240 | -0.001 | -0.370 | 0.000 | 0.040 |
| FZ | + | 0.228 | 4.770 | 0.262 | 5.550 | | |
| FL | - | -0.372 | -12.230 | -0.390 | -12.930 | -0.288 | -11.300 |
| CFO | - | -0.292 | -24.750 | -0.290 | -24.370 | -0.295 | -24.410 |
| LOSS | - | -0.008 | -2.750 | -0.010 | -3.540 | -0.008 | -2.750 |
| IDUSTRY | - | 0.001 | 2.300 | 0.001 | 2.460 | 0.001 | 2.020 |
| Constant | + | 1.428 | 50.080 | 1.425 | 49.460 | 1.473 | 53.230 |
| R-Squared | | | 0.695 | | 0.688 | | 0.678 |
| Adjusted $R^2$ | | | 0.684 | | 0.677 | | 0.667 |
| F-value | | | 63.580*** | | 66.230*** | | 63.190*** |

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**Table 2**

**Analysis of Additional Moderation**

| | | Normal Model | | Addition of IO*DH | |
|---|---|---|---|---|---|
| **Variables** | **Sign** | **coefficient** | **t-statistics** | **coefficient** | **t-statistics** |
| Constant | + | 1.310 | 23.170 | 1.285 | 21.780*** |
| BOIN | - | 0.013 | 1.910** | 0.134 | 1.960** |
| CEOD | + | 0.008 | 1.390* | 0.007 | 1.23 |
| DH | + | 0.008 | 1.950** | 0.036 | 1.840** |
| FEAC | - | 0.108 | 3.540*** | 0.109 | 3.560*** |
| ACIN | - | 0.052 | 0.880 | 0.632 | 1.07 |
| ACS | - | 0.007 | 0.610 | 0.015 | 1.15 |
| CT | + | 0.006 | 3.160*** | 0.006 | 3.03*** |
| CP | - | -0.009 | -3.050*** | -0.009 | -3.140*** |
| FZ | +/- | 0.260 | 5.490*** | 0.257 | 5.440*** |
| FL | +/- | -0.406 | -13.100*** | -0.410 | -13.190*** |
| CFO | +/- | -0.288 | -24.840*** | -0.287 | -24.800*** |
| LOSS | +/- | -0.007 | -2.510*** | -0.007 | -2.470*** |
| IDUSTRY | +/- | 0.001 | 2.120** | 0.001 | 2.210** |
| IO | - | -0.003 | -0.670 | -0.003 | -0.71 |
| IOX*FEAC | - | -0.022 | -3.750*** | -0.023 | -3.770*** |
| IOX*ACIN | - | -0.016 | -1.290* | -0.017 | -1.430* |
| IOX*ACS | - | 0.000 | -0.170 | -0.001 | -0.77 |
| IO*DH | - | | | -0.006 | -1.440* |
| R-Squared | | | 0.710 | | 0.712 |
| Adj. $R^2$ | | | 0.698 | | 0.699 |
| F-value | | | 55.890*** | | 53.050*** |

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